Dr. Kennedy's Compliments.

THE

CURABILITY OF CONSUMPTION:

BEING

A REPRINT OF A SERIES OF PAPERS,

ILLUSTRATING

THE MOST PROMINENT AND IMPORTANT PRACTICAL POINTS
IN THE DIAGNOSIS, PROGNOSIS, AND TREATMENT
OF THE DISEASE.

BY

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AND OTHER DISEASES OF THE LUNGS; AND FORMERLY LECTURER ON THE
PRINCIPLES AND PRACTICE OF MEDICINE; ETC.

"Recovery in Cases of Pulmonary Consumption, where the organ has not been wholly invaded, seems to me to present no character of impossibility, either as regards the nature of the disease, or that of the organ affected."—LAENNEC. (New [illegible].)

FOURTEENTH THOUSAND.

LONDON:
LONGMAN, GREEN, LONGMAN, AND ROBERTS.
1861.

——"It is the Duty of every Physician, in the Exercise of his Art, *to follow the Road which is pointed out by Nature; or to act in Subserviency to her Dictates.*"

Agreement between Ancient and Modern Physicians.

I. Barker, M.D., 1747.

LONDON: PRINTED BY WILLIAM CLOWES AND SONS, STAMFORD STREET.

PREFACE TO THE TWELFTH EDITION.

My views of the Nature and Cure of Consumption have now been promulgated for more than a quarter of a century, and I do not find it necessary either to alter or even to modify any of the principles I originally laid down. On the contrary, through the entire range of my long and extensive practice, their application has only tended to confirm me more and more as to their correctness and efficacy in the various stages of this insidious and very prevalent disease.

At a period previous to my being elected a Member of the Royal College of Physicians, I was well aware, by numerous instances in the human body, that Pulmonary Consumption was curable, though it required many years of laborious research and thoughtful consideration to ascertain by what means that little-to-be-discovered object could be attained.

So strongly prejudiced, however, against the possibility of Consumption being curable, were medical men, that, as an instance in proof, Dr. Thomas Davies, an Assistant Physician to the London Hospital, and Junior Physician to the Infirmary for Asthma, Consumption, and other Diseases of the Lungs, declared, "though Consumption may be *palliated*, I repeat again, that I believe the disease not to be *curable* by any means proposed up to the present time."

That this groundless and foolhardy assertion proceeded from the most incurable want of knowledge as to the manner in which Nature, as well as Remedial Art, operates

in effecting a healing process, is evident from the fact that, in one locality, within a radius of *one hundred and fifty yards*, no fewer than Four consumptive persons who were given over by this Physician, yet recovered, and lived many years after his *own* death.

In further confirmation of the correctness of my expositions as to the Curability of Consumption, I may here observe, that some years ago I examined in the West London Union, Smithfield, in the presence of the Medical Officer and others, several bodies not supposed to have been consumptive, and found on dissection no less than nine in succession, presenting well-defined traces of having been at one time affected by consumption, nevertheless were restored to health. And in the course of my professional life, I have seen many hundred specimens of the lungs of individuals who were cured by Nature alone; and not a few by the treatment adopted by myself. Nor have I any hesitation in affirming that, were the agencies recommended by me introduced into general practice, our Bills of Mortality would exhibit a considerable diminution when contrasted with that which they now present.

The present Edition will be found greatly improved and enlarged by the addition of some interesting cases which, though despaired of as hopeless by several practitioners, yet sufficiently indicate the soundness of my practice.

F. H. R.

40, *Clarges Street*,
26th August, 1861.

PREFACE TO THE FIRST EDITION.

The different papers which are here republished, appeared in a medical journal some years ago; when the pathology and treatment of pulmonary diseases were perhaps not so well understood as they are at present.

At a very early period of my professional career I was induced to devote my attention, almost exclusively, to the study of consumption and its allied affections; and my position, as Physician to the Infirmary for Asthma, Consumption, and other diseases of the Chest, afforded me the advantage of a very wide field of observation. New pathological views presented themselves to me, and suggested a plan of treatment which I soon found attended with the most signal success; and now, after an experience of upwards of thirty years, during which no less than 30,000 cases of consumption, in all its various stages, have come before me, I have no hesitation in saying—notwithstanding a different opinion is entertained by some medical practitioners—that this disease, when judiciously and skilfully treated, is as curable as any other disease, the curability of which is not disputed.

It is scarcely necessary to premise, that I do not here aim at setting forth a complete treatise on consumption. In these contributions, written in a detached form, amidst the more serious avocations of public and private practice, I only aimed at selecting some of the most prominent and important practical points connected with my views of the patho-

logy and diagnosis of this disease, for the purpose of showing how it may be treated in the most successful manner. The cases I have detailed, prove beyond any doubt the expediency and soundness of the plan of treatment I recommend; for, after all, the success of our practice is the best criterion of the correctness of our views.

It has indeed been a source of much gratification to me, to know that the principles propounded in the following pages are now adopted by many of the most eminent practitioners in this country. They have been recognised in France, Germany, and Italy; and I constantly receive letters from the United States of America requiring further advice and information. Under such circumstances, I feel that I can, with some degree of confidence, again submit these papers to the Profession, in the hope that their perusal will convince many who may have been sceptical of the curability of consumption.

F. H. R.

40, *Clarges Street, Piccadilly,*
26th June, 1850.

PREFACE TO THE FOURTH EDITION.

In republishing another edition of the papers which appeared in the "Medical Times" several years ago, it will not, I trust, be deemed out of place, to enter upon some account of the motives which induced me to connect myself with the Institution, now become, under august patronage, the Royal Infirmary for Asthma, Consumption, and other Diseases of the Chest.

As this was the only public charity specially established for an important class of diseases which seemed to require a closer investigation than had been generally bestowed on them, and as there was a peculiarity in the arrangement of its wards which were meant to imitate a genial climate, I felt the greatest desire to be connected with it. The very extensive field also which it presented, for beyond, indeed, what the largest Hospitals could afford for studying and minutely investigating the various affections of the pulmonary organs, was an object with me of the highest consideration. To form a large collection of morbid specimens, illustrative of the progressive effects of disease, was of itself a strong inducement to me to become its Physician. The circumstance of the College of Physicians possessing no Museum until they received a few hundred specimens from Dr. Baillie, and our Universities being almost unprovided with any indication of pathological labour previous to that period—it at once occurred to me—that an opportunity was now about to be afforded me of following the true path to practical and useful knowledge. I was, moreover, urged by the conviction, that my professional brethren were wholly in the dark, as to the nature

of Consumptive Disease, as well as to its treatment. There was evidently a total abandonment of everything like a rational method of opposing so general and terrible an enemy of the human race.

Devoted, from my entering into the medical profession, to pathological research, and having paid no small attention to the state of the pulmonary organs after death, and especially to their condition when affected with tubercles, I readily embraced the opportunity of offering myself as a candidate for the vacant office, when, in 1820, Dr. Buxton relinquished his appointment as Physician to the Infirmary for Diseases of the Chest, of which, in 1814, he had been the founder.

Indeed, so little regarded was this valuable field for studying the affections of the chest, that I had only one competitor, who, though practising as a physician, yet was not a member of the College of Physicians. I felt no surprise at this, having seen the treatment to which Dr. Buxton had been subjected, even by some of his own colleagues in the London Hospital, of which he was for several years one of the medical officers. The idea of a practitioner establishing an Institution for the treatment of consumption was considered altogether absurd. Had these gentlemen given their attention to this wasting disease with a zeal becoming its importance, they would have approved of, instead of decrying, so benevolent and praiseworthy an undertaking. Long before this, I had seen and known quite enough to convince me, that if the medical practitioners attached to our Hospitals had been in the habit of opening bodies with their own hands, and carefully and honestly searching minutely into the internal as well as the external signs of the disease, there would be no disputing, at the present day, regarding the curability of consumption.

When I made known the curability of the disease, it created some prejudice; but this did not surprise me, when I reflected on the state in which medical education was in this country in 1820, the year in which I began to practise as a

physician in this Metropolis, and how very superficial were the studies, and how limited and brief the examinations.

Within two years after my election to the Infirmary for Diseases of the Chest, I tried to awake the attention of the medical profession by announcing a course of Lectures on affections of the Chest; but the attendance on them did not meet my expectations. Soon afterwards I commenced, and continued to give for several years, Lectures on the Principles and Practice of Physic; and had a respectable class of pupils attending these Lectures, as well as the medical practice of the Institution where they were delivered.

I think it may be safely stated that more than two hundred members of the medical profession had, within the twenty-seven years I held the appointment of Physician to the Infirmary for Thoracic Diseases, witnessed my practice there; among whom were individuals connected with our leading medical journals. Mr. Wakley, jun., now Surgeon to the Royal Free Hospital, availed himself of the advantages thus presented, and had opportunities of seeing several hundred cases of pulmonary disease, many of which were consumptive, and had attended one or more of our principal hospitals without deriving any benefit. He, as well as others, expressed themselves satisfied with the great success of my mode of treatment, and acknowledged the impossibility of overcoming such a disease as consumption, without the aid of inhalation.

For several years, so fully have I been impressed with the conviction of the expediency of expanding the chest according to my method, that I did not hesitate openly to avow, that it would give me the sincerest pleasure, were permission granted, to show in any of our Public Hospitals, or in those especially intended for the reception of diseases of the chest, that a case of consumption is more easily cured than the profession at large is willing to admit. It would be the height of my ambition to have impartial reports made public of the issue of my attempts to cure consumptive disease, feeling as I do the fullest confidence in the result.

It is impossible to estimate the immense number of lives which have been, and are daily lost, in consequence of the erroneous, and, as Fournet and others justly observe, the mischievous opinion that consumption is not curable.

As a pupil, and at the commencement of my career as a physician, I clearly saw that there was in this country a great defect in medical education, and that no disease was so little investigated after death as consumption, or had its symptoms less systematically examined during life. Indeed, it seemed to me, that all the works on consumption were written from mere theoretical views, and not based on practical knowledge. Strongly impressed with this conviction, I never for thirty years lost a single opportunity of making post-mortem examinations; and the result has been a constant series of undeniable demonstrations, leading me to the certainty of the curability of consumption. And I have not failed to acquire proofs of the correctness of my deductions, by patient inquiry into symptoms, whether of an earlier or later date.

For many years I was almost daily struck by the frequent appearance of patients who laboured under some affection of the chest of a chronic nature, but who had never been questioned as to the origin of their disease, though it had been in many instances undoubtedly phthisical. Notwithstanding hectic fever, profuse perspirations at night or towards morning, expectoration of a yellow or reddish colour, a frequent and distressing cough, and emaciation to a considerable extent had appeared at a former period, still it rarely happened that any practitioner ever thought of inquiring if such symptoms had showed themselves previously. As to seeking antagonisms to consumption, though so evident, if looked for, it was never thought of. How frequently have I seen a remarkable retraction of the windpipe just above the sternum entirely unheeded—great enlargement of the tonsils, asthma, chronic bronchitis, and a number of other morbid states of the air-passages retarding the expiration of air from the lungs, and defeating the contraction of

the chest, that would have favoured the development of new crops of tubercles in the pulmonary tissue!

In public hospitals, as well as in private practice, the faculty would be well rewarded if they took the trouble of tracing out those cases in which consumption had at some period been present. The practitioner should, in the first instance, make himself thoroughly acquainted with the many antagonisms that oppose the disease, several of which are enumerated in this little work. Once master of this point, he can readily explain how certain individuals survive in a consumptive family; and how a whole generation in a family may live and die without ever displaying any symptom of the disease, though the offspring of parents who had themselves succumbed to that complaint. In this way, how easily we can account for its passing over one generation and appearing in the next; but the truth is, all those who were corrupted might be tuberculated, and yet not one of them die of consumption. The cause of which is, all the tubercles, however numerous, were destroyed, by antagonisms of one kind or other.

There is no truth in the statement that the cure of consumption is secretly effected in the human body. The symptoms of the disease are repeatedly showing themselves; but too often no notice is taken of them, either by the medical attendant, the patient, or any one of the family. When recovery takes place, and death ensues from some other disease, the morbid appearances the lungs exhibit of cured consumption are frequently evident: but its symptoms have, during the life of the patient, been too frequently wholly unnoticed. Thus the affection is incorrectly said to have been secretly cured, or, as Dr. Latham erroneously asserts, "without our knowing or suspecting anything about it:" in fact, it had been, to use his own words—"a consumption that nobody knew to exist."

No practitioner, in the possession of a fair share of practice, can pass a day without being consulted by persons who at some

period of their lives had been attacked by consumption; but whether from the want of time to enter into the minutiæ of disease long passed, or not suspecting the frequency of recovered cases, it rarely happens that a question is put relative to that disease.

The neglect of the pathological investigation of consumption in this country was, not a little owing to Dr. Young's laborious treatise on that disease; in which, in his notice on Bayle's work on phthisis, he is candid enough to confess that much valuable matter may be found, although the practical importance of anatomical observations in general may have been somewhat overrated by the author. This physician, speaking of his own disease, says, "I cannot help being persuaded that in my own case there was an incipient formation of tubercles: the difficulty of breathing, the hectic symptoms which I experienced, not being intelligible on any other supposition." He tells us he was in the daily habit of exercising in the open air, even when the weather was cold. Can anything be more exactly in unison with my views of this disease? Here we have the hectic fever and the difficulty of breathing; the one the consequence of the softening of tubercles; the other, the result of the spasmodic contraction of the trachea (asthma), rendering the lungs voluminous, and healing up cavities, or, what are vulgarly called, *ulcers of the lungs*.

Observing, in the course of my pathological investigations, to what extent the lungs are enlarged in cases of recovery from consumption, I have often been astonished that no practical inference as to the scientific treatment of the disease had ever been drawn therefrom. I mean, that no mode of treatment had been adopted to expand the lungs, in imitation of the effects which follow various antagonisms by which consumption is arrested by Nature. Indeed, the infrequency, under particular circumstances, of the renewal of consumption when retarded for some length of time, has been neither well understood nor well observed. I may state the same of the

secondary affections of consumption, such, for instance, as the disease of the bowels, of the larynx, &c., for I nowhere find any explanation of the cause of their absence in particular cases.

Laennec laboured under a great mistake in supposing that the lungs, having once a tuberculous deposit, were inevitably liable to an invasion of new tubercles. In support of my own opinion, I may mention, that enlargement of the tonsils, asthma, disease of the heart, &c., so entirely alter the habit, that scrofula in many instances ceases to exist, and also the formation of tubercles.

At the Infirmary, and in my private practice, I have had repeated opportunities of satisfying myself as to the non-existence of consumption after it had ceased for many years to show itself: being personally acquainted with several individuals who long since recovered from consumption under my treatment, and also knowing many who have had an unfavourable opinion of their case pronounced by different physicians—yet are now possessed of good health, and have been so for many years.

The unhappy prediction was justifiable; for, treated according to the usual routine adopted in phthisical disease, very few recoveries take place. It appears from the first Medical Report of the Hospital for Consumption, which was printed in 1849, and on which I remarked in the "Lancet" of the 11th of May, 1850, that owing to the old system of treatment being persisted in, and inhalation being employed for the mere relief of symptoms, there has been as great a failure in the cure of consumption as before the Institution was founded.

The following are my views on this subject, as they appeared in the above journal:—

The First Medical Report of the Hospital for Consumption and Diseases of the Chest has doubtless been received with interest by the profession, and I confess I took it up in the hope that the experience of an Institution, admitting on an average 1,650 patients *per annum*, would afford satisfac-

tory evidence of the curability of a disease for which it was specially founded. In this, however, I have been disappointed, for on referring to Table XXVII., which exhibits the results of the treatment of 535 individuals, classified according to age, sex, and the stage of the disease, not a single case of recovery is recorded; nay, as if under a fatal prognostication, there is not even a column allotted to cases cured. The greatest amount of benefit achieved would appear to consist in the disease having been, as the Report states, in some cases "*arrested*," and in others "*much relieved*;" the term "arrested" signifying that all the symptoms of the disease had disappeared, and that the patients, feeling themselves well, had returned to their usual ordinary occupations. The term "much relieved" signifying the removal of the principal symptoms, the health of the patient still remaining delicate. Under this classification, out of 535 in-patients, only 23 appeared to have had the disease arrested, while 133 were "much relieved;" that is to say, the disease was arrested in only 4 per cent., and relieved in nearly 25 per cent.: the treatment, therefore, at the Hospital for Consumption, may be characterized as affording only partial and temporary relief, and as eminently unsuccessful so far as the *cure* of the disease is concerned. Whence, may I ask, does this arise? No doubt the medical officers of the Institution prescribe with skill and judgment the various medicines applicable to the different stages of the disease; but it appears to me, (and I speak after having for years made this devastating disease my almost exclusive study, and having the advantage of extensive practice in it,) that they underrate the good effects and efficacy of inhalation, or perhaps they do not apply it in the most correct manner. "Inhalations," says the Report, "have been tried under a variety of circumstances, and with signal benefit to some labouring under these distressing symptoms, such as cough and difficulty of breathing." Now I do not consider the alleviation of cough and difficulty of breathing to be the most important and only ends to be aimed

al, notwithstanding the relief the patient may thereby receive. We may alleviate with great advantage those afflicted with these distressing symptoms, but we must not limit our practice to mere symptomatology, but proceed upon pathological principles to attack the seat of the disease. If tubercular cavities exist, the object of treatment is obviously to produce their cicatrization. How is this to be effected? By enlarging the volume of the lungs; namely, by distending the air-cells, whereby the pressure from without approximates and brings into contact the walls of the tubercular cavities, which being brought into apposition, heal by the first intention. Hence the intention is to produce such an expansion of the lungs as will bring into immediate contact the internal surface of those cavities which can only be effected by mechanical means. The process must, however, be conducted with an apparatus scientifically constructed, and it should be often and regularly repeated, and continued long enough, in order to prove successful. In all cases of consumption inhalation should be practised two or three times a day, for half an hour each time; the result of which will be, that in a few weeks an extraordinary change will take place in the conformation of the chest. In many cases, I have found that even within a month the chest has increased an inch or more in diameter, and after a more lengthened period—two or three months—it has been found necessary to case the waistcoat. One of my patients, the Rev. W. Howe, of New York, after using the respiratory tube with great benefit, wrote to me as follows:—"The shape of my chest is astonishingly improved and enlarged. About six years ago the measurement of my chest, close under the arms, was thirty-two inches, but for the five years following there was a gradual diminution, so that for three years previous to my procuring the tube, the circumference of my chest was thirty inches, making a decrease of two inches. Since using the tube I have increased in circumference inches and a half, making my measurement now thirty-two and a half inches. But the alteration in the conformation

of my chest is truly wonderful. The collar-bones were very prominent, and the chest so drawn together that I was afraid to see myself in the glass; now my chest has assumed a round and plumper appearance, and my neck is filled out, so that the conformation is better than it has been for years."

This case, to which I could add many others, needs no comment.

Here I may observe, that inhalation needs little respiratory effort beyond the simple act of breathing; to speak more precisely, the patient should inhale and exhale eight or ten times in a minute. During this operation the body ought to be in an easy posture, and the chest relieved from any pressure occasioned by the clothing. At the commencement of the practice, the inhaler should be used three times a day —morning, noon, and night—for the space of five minutes each time; every day extending the time by one or two minutes to half an hour. Afterwards the time may be reduced to five minutes, by diminishing the process by one or two minutes daily. In this manner, the use of the respiratory tube should be continued long after the subsidence of the symptoms of the disease. But I may here remark, that this plan of treatment is always contra-indicated in cases where there is spitting of blood, difficulty of breathing, or pain in the chest; or, during the presence of any acute affection, the practice of inhalation should temporarily be suspended, but may afterwards be resumed with caution.

Hence I regard inhalation as a most important remedial measure; its success has been witnessed and attested by many medical men of eminence, and it is worthy of observation, that, in no single case, has any injurious effect ever been produced by the operation. However, I wish it to be distinctly understood, that I by no means repudiate the internal use of medicines, or the ordinary mode of treatment by external means—cupping, leeching, blistering, &c., but I maintain that medicines *alone* will not cure the disease, because it is necessary, as I have already explained, to bring

about the cicatrization of existing cavities, which must be accomplished by the approximation of their internal surfaces, and this can only be effected by the gradual approach and eventual contact of the walls of the cavity itself.

The medical officers of the Hospital for Consumption state that experiments, with the view of ascertaining the simplest means of using inhalations, are now in course of trial, and that they reserve their remarks for a future report. They must excuse my suggesting to them the proper choice of the respiratory tube itself, which, as I have premised, should be scientifically constructed, care being taken in conducting the process, and perseverance in employing it; which precautions being observed, I feel satisfied that in so wide a field of observation as they enjoy, they will have the satisfaction of obtaining the most beneficial results.

A friend of mine having been a most liberal benefactor to the Hospital for Consumption, I naturally felt a strong interest in the Institution, and visited it between two and three years ago. I soon saw quite enough to convince me that all the care and skill bestowed on the patients would be ultimately fruitless so long as the steady use of inhalation was neglected. It did not, I thought, become me as a visitor to enter minutely into the several cases; still I found, without an exception, that where any real improvement had taken place it could be traced to some antagonistic affection existing before admission into the Hospital.

In the first ward I entered, which was that for females, I requested the nurse to show me some of her good cases, and she immediately complied by presenting two young women who were regarded as instances of satisfactory amendment. They looked apparently well: but I discovered, on questioning them, that both of them had been attacked with symptoms of consumption three years antecedently. It had been considered that the taking of cod-liver oil had produced a favour-

able effect in their cases; but I felt satisfied that their existence was due to an antagonism arresting the disease, and which was the sole cause of their being alive at the period to which I allude. The same inquiry was extended to the other wards, and the result was exactly the same; though to cod-liver oil was ascribed the credit of producing substantial benefit among the patients. I left the Institution under the firm impression that this article, which possesses no virtue beyond being nutritive, was not in reality the agent to which should be attributed the prolongation of their existence, but to some one or more of the antagonisms afforded by Nature.

I have no doubt that the warm air continuously supplied to the patients in the Hospital had the effect, in some cases of consumption mixed with bronchitis, of moderating the secretion from the bronchial mucous membrane, and the tuberculous cavities where they existed, and thus increasing the flesh of the patients, served also to augment their strength. Moreover, the improved diet and inactivity, combined with diminished anxiety of mind, tended probably, in no small degree, to that increase of weight which many of the patients are stated to have acquired when making use of cod-liver oil.

F. H. R.

40, *Clarges Street*,
20th January, 1851.

THE CURABILITY OF CONSUMPTION.

[Reprinted from the Medical Times, August 27, 1842.]

The misunderstanding and obscurity which so long prevailed respecting the nature and treatment of phthisis, gave rise to a popular notion, which amounted almost to superstition—entertained even by many professional men of eminence—that this disease, when once developed, was incurable, and that the victims it assailed were predestined to sink into an early and premature grave. This gloomy prognosis threw a cloud over the happiness and prospects of every family doomed to contend with so grievous an affliction: in fact, the case was looked upon as one truly desperate; for, the disease being pronounced hereditary, it was considered to be entailed from one generation to another. Happily, the progress of Medical Science has done much to dispel this delusion; inasmuch as it has been proved by evidence the most irrefragable and conclusive, that consumption, even in its advanced stages, may be arrested in its progress, and cured with as much certainty as any other disease incident to humanity. Many years ago the illustrious Laennec published cases showing that Nature effected a curative process in the lungs by the cicatrization even of extensive tubercular cavities, and came to the conclusion, that "patients may recover after having had in their lungs tubercles which became softened and formed ulcerous cavities." He states, that on the shores of the Bay of Douarnenez, his native place, whither he himself retired in a state of latent phthisis, one-half of the consumptive cases were cured. Unhappily for science, this great man was cut

off prematurely by the very disease he had so profoundly studied.

Fournet, who obtained the prize at the Concours of the Hospitals of Paris, for his clinical researches on auscultation of the respiratory organs, in the preface to his work, expresses the confident hope that his investigations may impress the influential classes of society with the salutary conviction that consumption *is* curable, and that an opposite opinion is not only incorrect, but injurious. Dr. Carswell, in the "Cyclopædia of Practical Medicine," observes:—

"The important fact of the curability of the disease has, in our opinion, been satisfactorily established by Laennec. All the physical signs of tubercular phthisis have been present, even those which indicate the existence of an excavation, yet the disease has terminated favourably, and its perfect cure has been demonstrated by the presence of a cicatrix in that portion of the lungs in which the excavation had formerly existed. . . There must be few practical pathologists who will not consider these anatomical facts as evidence that tuberculous phthisis is a curable disease. No objection has been brought forward calculated, in the slightest degree, to invalidate the conclusion to which we have been led by the repeated observations of the changes we have described, viz.:—that these changes are positive indices of the removal of the material element of the disease, and also of the cure of the lesions of structure to which it gives rise, even at an advanced period of its progress. . . . We cannot avoid repeating the fact, that pathological anatomy has, perhaps, never afforded more conclusive evidence in proof of the curability of a disease, than it has in that of tuberculous phthisis."

Here it may be premised, that by consumption I understand the deposition of tuberculous matter in the substance of the lungs, which, unless checked by nature or art, will so far derange or destroy their structure as to render them unfit for their vital function in the system. Tubercular deposition almost invariably commences in the summit of one or both lungs, and, if uninterrupted, gradually spreads to the lower lobes. Catarrh has been considered to be one of its most frequently exciting causes; but my observations induce me

to believe that catarrh is not, and cannot be, a direct *cause* of this disease. An inflammatory state of the mucous membrane lining the bronchial tubes has no necessary connection with this deposit of tuberculous matter. It may, when severe, promote its softening and consequent expulsion; but in so doing, it tends to establish a condition which is capable of protecting the lungs from further injury. It is, in fact, one of the principal agents by which Nature endeavours to effect a cure.

The presence of tubercles and of cavities of any kind in the lungs is not incompatible with the continuance of life. The danger lies in the successive and continuous formation of tuberculous matter, and not in the liquefaction and elimination of a portion of it. So long as the lower lobes are exempt, the patient rarely dies from phthisis; but it may be observed, incidentally, that a great many patients die under secondary affections. Autopsy displays the lungs in various states and stages of tuberculization. A very considerable number of persons in this country have, or have had, tubercles in their lungs; and were it not for the existence of natural or artificial interruptions to this disease, the population would probably be diminished by at least one-half.

I have said that catarrh is one of Nature's great remedial agents in consumption; and shall, at the risk of being charged with repetition, adduce here and elsewhere cases and arguments in proof of this assertion. Before me is a letter from a highly respectable solicitor, illustrating the truth of this statement. His father had, in early life, exhibited unequivocal signs of consumption, and was despaired of by the physicians at Naples. Business obliging him to repair to Newfoundland, he, in that cold climate, contracted catarrh, under which he laboured during the remainder of his life, which terminated in his 84th year: and we need only look around us among the circle of our acquaintance to find ample proof of the correctness of these views. We may observe persons in youth, middle, and old age, suffering from what is called a constitutional cough, yet otherwise enjoying good general health, even living to the most advanced term of human existence, and carried off, ultimately, by a disorder unconnected with consumption. If the early history of many of these cases be

traced, it will be ascertained that the catarrhal state had been preceded by the characteristic signs of phthisis—the hectic fever, perspirations, purulent expectoration, &c.;—that the catarrh, or bronchial affection, which, in fact, supervened on consumption, had arrested, marked, or cured it. The lungs, too, of these persons, will be found to exhibit, on dissection, unquestionable vestiges of tubercular disease.

The supervention of asthma, either consequently on chronic catarrh, or in its idiopathic form, arrests the progress of tubercular deposition, and renders inert and harmless tubercles previously formed. Throughout the entire range of a practice, of no ordinary extent, a case of idiopathic asthma accompanied with consumption, and terminating fatally, has never come under my observation.

Another very important circumstance claims attention here. Enlarged tonsils have the effect of arresting phthisis, while, in most instances of phthisical manifestation, they will be found either very small or apparently absent. Nature moreover, it may be mentioned, avails herself of other pathological conditions, which have a prophylactic effect; for instance, bronchocele, tumours pointing to the pharynx, polypi of the nasal passages, a strumous thickened state of their lining membrane, contractions of the windpipe, whether spasmodic or structural, aneurysm of the aorta, disease of the heart from whatever cause, hysteria, pregnancy, obstruction of the liver; in short, whatever impedes free expiration tends to mitigate and arrest the disease.

The controlling influence of cardiac affections over phthisis is well marked, and highly illustrative of the statement now made. Such cases are every day to be met with: so long as the affection of the heart is in the ascendant, the morbid process is kept in abeyance; a lesser evil being substituted for a greater.

In consumption the lungs are not fully inflated, and the walls of the chest undergo gradual contraction. The normal relation between the powers of inspiration and expiration is lost. The great air-passage becomes, as it were, too wide for the diminished volume of the lungs. Whatever, therefore, restores the normal relation between the lungs and the wind-

pipe, contributes to arrest the progress of tubercular disease. If this principle be applied to the various diseases above mentioned, we shall be enabled, without difficulty, to account for many extraordinary results. For instance, let us begin with catarrh. Here the infection of the mucous membrane, preventing the free egress of the air, impresses it on the air-cells and produces a somewhat emphysematous state of the lungs, expanding their entire volume to a certain degree, and pushing outwards in every direction the walls of the chest. Asthma also acts in a similar way. The membranous portion of the bronchia being spasmodically contracted, confines the air within the lungs, and fills up every available cell. The lungs, it may be observed, are not at all times equally or perfectly expanded—a fact, of course, well known; in asthma, every permeable cell is more or less filled with air. So, also, tumours, external or internal, contracting the circumference of the air-passages, such as preternatural glandulary development, polypi in the nose, as already remarked, bronchocele, tumours at the root of the lungs, will produce the same effect. In diseases of the central organ of circulation, venous congestion takes place in the mucous membrane that lines the bronchial ramifications, and hence tuberculation follows. The anatomist will at once understand the circle of changes by which this is brought about.

Taking for granted, that what has just been stated is really the case, we may perceive how economical and admirable is the use which Nature makes of her own resources. She establishes her outworks in the nares, the fauces, and the pharynx; draws her parallels in the larynx and trachea, and when destitute of materials in these lines of defence, falls back on the capital, and often contends for life in its very citadel—the heart. Continental writers have done much to elucidate this subject, but, singularly enough, never seem to have put the question to themselves, how it is, that the cicatrizations, denoting the existence of old cavities, and the quiescence of tubercalous matter, were brought about. Any one who peruses the work of Laennec attentively will at once see that he frequently approached the solution of the difficulty, but always stopped short; yet it lay so obviously in his way, that it is singular he

did not discover it as a matter of necessity. The expansion of the lungs brings the walls of a cavity into contact, and thus effects union, as it were, by the first intention; while the healthy, well-developed action of the lungs renders old tubercles inert, and prevents the deposition of new tuberculous matter.

This being the true pathology of phthisis, the object of treatment should obviously be to imitate the curative process which Nature herself adopts; and for this purpose we may have recourse to various expedients. That which I have indeed found convenient, and very successful, has been the inhalation of common atmospheric air through a tube, which, while it admits the air freely, presents a slight obstruction to its egress. The full inflation of the lungs is hereby secured. The chest becomes by degrees expanded, and the healthy relation between the lungs and the windpipe imperceptibly restored. The mode of using this tube, though apparently simple, is not well understood: hence, many persons take it up, and deriving no benefit, lay it aside as useless. The manner in which inhalation operates, is similar to that effected by catarrh or bronchitis. It possesses, however, this important advantage, that what Nature merely attempts, or imperfectly accomplishes, is hereby effected more surely, and without superinducing any new disease. I have never known an instance of bad effects, or even inconvenience, resulting from the use of the inhaling tube. Medicated Vapours, though formerly not much esteemed by me, I have found from experience to have a soothing and antispasmodic power. The Inhaler for Herbs combines both the mechanical as well as the proper medicinal action.

The use of the inhaling tube I consider to be essential in the treatment of phthisis; indeed, all other treatment is comparatively secondary and ancillary. It possesses the negative recommendation of simplicity and safety; and it may be advantageously resorted to in cases of asthma as well as phthisis. In asthma the windpipe is too small for the volume of the lungs, and, though it may seem contradictory, the mechanical respiration by the tube has the effect of restoring this disturbed relation to its healthy standard. The objection

to it, on the score that asthma is liable to be superinduced by its use, arises from mere prejudice. Could I but present one-tenth part of the cases which have been rescued from premature graves, chiefly by means of using this instrument, it would force irresistible conviction on the most incredulous, or at least induce them to institute a number of experiments patiently and judiciously, so as to satisfy themselves of the truth.

Let it not, however, be supposed that constitutional treatment is to be consigned to neglect, or deemed a matter of trivial importance. The judicious application of leeches over the parts affected, and, at proper intervals, blisters, tonic and sedative medicines, &c., constitute an important part of the treatment, and afford ample scope for the nicest discrimination. When symptoms of inflammatory action in the chest present themselves, the mechanical expiration is contra-indicated. The possibility of its abuse or misapplication, together with the necessity of subsidiary general treatment, point out the propriety, or rather the necessity, of medical superintendence.

The mode of treatment has many advocates, both in this country and abroad. Laënnec, physician to the King of the Belgians, and senior surgeon of the Military Hospital at Brussels, as also Hahnemann, physician to the Duke of Saxe Meiningen, and a distinguished pathologist, highly approve of it. Among the American medical men, might be mentioned the names of Drs. Newton, Hall, and others, of Philadelphia, as well as several distinguished practitioners of the same country; together with a great many continental physicians, all of whom have adopted its use, and are its zealous supporters.

[Medical Times, September 3, 1842.]

The frequent coincidence of catarrh with the manifestation of consumption, cannot be denied; but this fact may be accounted for on a widely-different hypothesis from that which supposes the former to be the cause of the latter. A very large proportion of catarrhal cases, it will be granted, are not followed

by phthisical symptoms: persons very liable to colds rarely die of consumption. When this disease shows itself in summer, catarrh seldom accompanies it: the coincidence takes place in the winter,—and, finally, there is no argument, founded on either anatomical or pathological deduction, which can be brought forward to prove that catarrh ever stands with respect to phthisis as its primary cause. This seems to be one of those assumptions, which by tacit general acquiescence has been allowed to pass as an indisputable truth. Under what circumstances, and to what extent, it may be regarded as an exciting cause of the manifestation of this disease, is another and very important question. Laennec observes, "We meet with many persons whose first cold is merely the catarrh that accompanies consumption, excited, no doubt, by the presence of tubercles in the lungs,"—making out that catarrh is frequently the effect, and not the cause. This may be explained as follows:—An extension of irritation takes place from the diseased structure of one lung into its bronchial ramifications; the trachea is then affected and irritated by sympathy; this irritation is then reflected, and operates in the same way on the mucous membrane of the other lung.

But we may safely go further than this. Irritation and inflammation of the mucous membrane, when severe, may, and often do, lead to liquefaction of tubercles already formed; that is, may cause the manifestation of phthisis previously latent.

The most heterodox part of this view may appear to be that which considers catarrh to possess a curative influence on phthisis. How it operates by dilatation of the air-cells and expansion I have already explained; and, on this head, court the most ample discussion. "The motion of the upper part of the chest," Sir James Clark states, "at the early periods of phthisis, if carefully observed during inspiration, may be remarked to be unequal; one side of the chest being more fully expanded than the other." In the progress of the disease, "the upper parts are less freely raised during inspiration," and, at a more advanced stage, "the form of the chest is remarkably changed—there is a

deep hollow space between the clavicles and the upper ribs —the chest is flat, instead of being round and prominent, &c." What do these changes of form, so evident to every observer—this collapse of the substance of the lungs, in various degrees, indicate, but the necessity of that counter-expansion which Nature is frequently enabled to effect in the manner already described?

This leads me to advert to the popular and fashionable practice of sending patients in the various stages of phthisical development to mild and foreign climates. It is singular that so much care should be taken to secure a mild and mean temperature; yet, when we come to inquire of patients who have wholly or partially recovered, we find that their symptoms first make their appearance in winter. By the disease showing itself at this season, it so happens that it associates itself with catarrh, thereby counteracting the contraction of the chest, and thus opposing the production of fresh tubercles. The softened tuberculous matter having become diminished during winter, the return of the spring and summer may remove the catarrh, leaving the patient secure merely for a time. In consumptive families, those members who are catarrhal will be often found to be the only survivors, though left to Nature; and the practitioner may often soothe the anxiety of relations, by pointing out those who have passed through the tubercular ordeal. Again, we generally observe that fatal cases are those which first show themselves in summer, and are thereby deprived of the advantage of early association with catarrh. Again, let us examine cases of chronic catarrh of less than five years' standing, before traces of the early symptoms have vanished from the mind, and we shall find many patients who retain a lively remembrance of the existence of the indubitable signs of phthisis antecedently. Even at a period so late as ten years, in one-half the instances, by questions properly put, and calling in the aid of their friends' recollections, the same results will be ascertained. The catarrh supervening, has thus arrested, or permanently cured, the consumption. The phthisical patient, by going to a southern climate, loses an important chance of recovery by catarrh, the most

frequent cause of which is exposure of the cuticular surface to cold, which constringes the superficial vessels of the body. The deeper-seated vessels then become congested, and the bronchial mucous membrane has a difficulty in transmitting its venous blood into the venous system, and in consequence becomes tumefied; which tumefaction, by its power of retarding the expiration, arrests the progress of the disease.

[Medical Times, *September* 11, 1842.]

One of the alleged benefits of a southern climate, is the influence of a warm dry air on the animal economy, promoting an equable distribution of the circulating fluids over the system, and particularly augmenting the circulation of the capillaries on the surface, and diminishing in the same proportion the congestion of the internal vessels, &c. We have means at home to promote the equable distribution of the circulating fluids; but by diminishing the congestion in the mucous membrane of the lungs, we cut off from the patient the advantage of the remedial agency of our own climate. The liquefaction of tubercles may take place at any time; it is highly necessary, therefore, that the patient should always be within the reach of the best medical advice, which is hardly to be met with when at sea, or in many of our foreign places of resort. Persons sent abroad indiscriminately, for various diseases, are liable to fall into the hands of unskilful practitioners, who may, under the supposition of disorder of the liver, or from some other erroneous view of the case, administer mercury, and thus rapidly bring on a general and sudden softening of the tuberculous deposit. Aggravation of the symptoms always attends these liquefactions, and demands the utmost vigilance and skill, which may be more surely expected from one who has had familiar acquaintance with the patient's constitution, and the history of his case, than from a stranger.

The bland effect produced on the nervous system by change of scene, &c., with the superior opportunities of taking exercise in the open air, may easily be obtained in

England to any desirable extent, without incurring either the expense and all the inconveniences of a long sea-voyage, or a journey by land. The great advantages derived from a change of climate consist in the stimulus given to the lungs by exercise, the change of air or its bracing qualities, or at sea—deepening the inspirations and expanding the chest. As to exercise in the open air, that may be obtained at home, without incurring the risk of breathing a cold temperature,—for instance, through Jeffrey's respirator, if desired, though if the intervention of catarrh be a good, rather than an evil, this instrument will be rarely used by consumptive patients.

The lungs may simply and safely be kept in daily exercise, and expansion to the full amount may be effected by atmospheric inhalation, through the respiratory apparatus. I have never known a well-marked and decisive instance of phthisis cured by removal to a southern climate. Those who return, no doubt will be found, on examination, to have carried with them their protection in their own persons, in the form of enlarged tonsils, cardiac affections, &c. And very many who have breathed their last abroad in the unavailing pursuit of health, would probably have lived many years, had they remained at home and liable to contracting a catarrh, or retaining one already contracted, by losing which in their travels, they may be said to have parted with their best protection.

The use of the inhaling tube supersedes the necessity of recurring to the expedient of superinducing catarrh; but, in the absence of the inhaler, I have no hesitation in saying, on the principle of choosing the lesser of two evils, that exposure to the exciting causes of catarrh, under prudent restrictions, is an alternative that may be judiciously adopted by consumptive patients; for, it is a well-ascertained fact, that the poor often owe their protection against the effect of this disease to their frequent exposure to the open air, and the vicissitudes of the weather.

A lady of illustrious rank, the late Queen Dowager, who for a long period laboured under occasional phthisical symptoms, owed possibly the prolongation of her life, not

so much to remedial treatment, as to the disease manifesting itself in the winter season, and its consequent association with catarrh,—or to enlarged tonsils, a cardiac affection, or some of the influences already named, which oppose the formation of fresh tubercular matter. It is true that at one time the chief danger was from the catarrh, which might have been followed by inflammation, either with or without œdema of the lungs. The air of Malta and of Madeira and other changes of locality were ineffectually tried: but the inhalation of atmospheric air would, unquestionably, have proved more advantageous. The lady of a gentleman, who held a highly-confidential appointment in Her Majesty's establishment, had been ten years suffering from convulsive asthma; under the system prescribed of using inhalation, and appropriate medical treatment, she recovered in a few months, and, with the exception of a slight relapse, which was easily removed by the same means, she still remains perfectly well.

An officer in the Guards, son of one of the members for Bedfordshire, was pronounced by one of Her Majesty's physicians in ordinary to have a cavity in the right lung; he expectorated blood. In this case the chest was decidedly flattened, particularly over the the site of the cavity, beneath the clavicle on the right side. Restorative and sedative treatment, with the use of the inhaler, were adopted; the inhalation being persevered in for some months. His symptoms gradually disappeared, the chest re-expanded, and he afterwards enjoyed excellent health, while remaining with his regiment in Canada. Had he gone abroad, as at first advised, the case would probably have proved fatal.

The son of a respectable merchant in the Borough, whose only brother had died of consumption the year previous, was recommended, by the author of the "Sanative Influence of Climate," to go to Madeira; but, on being otherwise advised, in consequence of its having been ascertained that he was without any of the natural defences against the progress of tubercles, and, besides, being hectic and emaciated, spitting blood, &c., he remained at home, where, by the use of the inhaler, and general constitutional treatment,

he by degrees lost all his unfavourable symptoms, to the agreeable surprise of Dr. Hull, of Peckham, who, as the family practitioner, had the case under his daily superintendence.

I have now before me the copy of a letter written by a Scotch gentleman, Mr. C—p—ll, to the father of the late Master of the Mint, in which, after detailing the early history of his case, he states that he consulted Drs. Abercrombie and Spittall, of Edinburgh, who pronounced his lungs tuberculated, and advised him to go to Madeira. On the eve of departure he was advised by Dr. Hull, of Peckham, to consult me, when I found that his case was decidedly consumptive,—a well-marked cavity existing in the summit of the right lung. Persuaded by me not to go to Madeira, he remained at Peckham, and adopted the mode of treatment now recommended, consisting of restorative diet, medicines &c., adapted to more urgent symptoms,—out-door exercise, though in winter,—and the mechanical process of inhalation. By persevering in this course for four and a half months, he increased in weight about 16 lbs., the chest expanded some inches, his breathing became perfectly natural, and the expectoration ceased. He considered himself chiefly indebted to the inhaling tube for his improvement, but at the same time attached due importance to the auxiliary treatment.

To the medical gentlemen who attended the Infirmary for Diseases of the Lungs, I have repeatedly explained the fact that the regulated atmosphere of the wards—(65° Fahr.)—in general did not suit consumptive patients, and was only useful in cases of chronic catarrh. Even the matrons of the Infirmary, one of whom held the situation seven years, and the other three, uniformly observed that, in consumptive cases, the regulated temperature, and confinement of the patients in the wards, were after a time injurious; and their frequent opportunities of observation entitle their opinion to some consideration. Dr. Baxton, who founded the charity, also entertained the same views: and my experience, during a period of more than twenty years at the infirmary, led me to the same conclusion.

[Medical Times, *September* 24, 1842.]

Before entering upon any further disquisition on the principles now propounded, I shall proceed to adduce a few additional facts confirmatory of the main question. This mode of procedure, both in the way of argument and illustration, will perhaps more readily remove prejudice and induce conviction.

A few years ago I was requested to see Miss S—th, daughter of a respectable individual in business in Little Britain. She was then labouring under an affection of the heart, attended with difficulty of breathing, and the respiration was somewhat obscure in the summit of the left lung. During convalescence from an attack of continued fever in the spring of the year, she began to cough, and to expectorate blood and purulent matter; evening chills and night sweats took place; in fact, she exhibited all the symptoms of manifest consumption. An unctuous gurgle was heard every time she coughed, clearly indicating the existence of a cavity in the left lung. Her chest, which had been formerly large, presented a marked depression under the clavicle of the left side. There was no possibility of preventing the progress of the tuberculous liquefaction; to effect, therefore, an immediate removal of the symptoms was not possible. Her friends were advised to take the opinion of Dr. T. Davies, the junior physician of the Infirmary for Diseases of the Lungs, who accordingly met me in consultation, and agreed that the case was one of decided consumption; but without reserve on his, or concurrence on my part, he announced to the family the utter hopelessness of the patient's recovery. No words can describe the agonized state of the parents' feelings on hearing a decision so unexpected; but under the impression that he had only given an unbiassed, candid opinion, his services were retained till, in despair, he abandoned the case. About a month after the consultation I was again called in, and the patient being placed under my entire management, was treated upon the principles already described, under which, in a few months, she recovered and remained quite free from all consumptive symptoms.

A young lady, Miss S—tt, about sixteen years of age, then residing near St. Bartholomew's Hospital, and since removed to another locality, exhibited the usual symptoms of consumption, which appeared to have been brought on by scarlet fever, caught some time previously at school. Her health had been always delicate, and her lungs, no doubt, had been already tuberculated. Either in consequence of the fever, or the liquefying powers of mercury probably employed in subduing it, a cavity had formed, the existence of which was considered to indicate sufficiently the absolute incurability of the case, and it was therefore pronounced that she could not possibly survive to Christmas. Notwithstanding this prognosis, which was also given by Dr. Davies, she still lives, and enjoys excellent health. When placed under my care she was suffering under asthmatic, combined with consumptive, disease. Her asthma was so severe, as to render her for whole nights incapable of lying down. The cavity in the chest remained distinctly perceptible on auscultation. She had become catarrhal from the occurrence of winter, and besides, from hereditary circumstances, derived a disposition to convulsive breathing. It might be supposed that the supervention of asthma, and consequent emphysematous state of the lungs, would have brought the walls of the cavity into contact, and produced its obliteration; but here the surrounding induration of the pulmonary tissue seems to have been of such a thickness as to prevent the walls of the cavity from coming into contact by the emphysematous pressure. Some pleuritic adhesion also might have interfered with the mobility and expansion of the lung towards the diseased structure. Not dismayed by this complication of asthma with consumption, having first soothed the spasmodic irritability of the trachea, which is ever present in asthma, by one or two leeches applied over the depression above the sternum, I recommended and prescribed the process of inhalation, along with sedatives, diuretics, &c. The primary object was to reduce the distressing enlargement of the pulmonary tissue: this was effected by making the expirations more complete through the agency of the inhaling tube, which possesses the twofold property of expanding the

lungs when contracted, and restoring them to the normal state when too voluminous. Meanwhile, proper attention was given to reduce congestion in the summit of the diseased lung; and inhalation, while exerting its salutary influence on the asthma, tended to approximate the internal surface of the cavity, so as to produce cicatrization. Her recovery was tedious, owing, in a great measure, to her occasionally discontinuing the treatment when decided amendment showed itself. The chest, which at the commencement was remarkably flattened in front, with the shoulders prominent, by degrees became sensibly improved, and acquired a very satisfactory amount of development. She finally exhibited no signs either of asthma, or consumption, and now enjoys good general health.

The eldest son of Mr. E—g—n, the extensive marquée manufacturer at Smithfield Bars, presented all the symptoms of consumption, and was given up as incurable. Notwithstanding this gloomy prognosis, he gradually recovered, and remained in tolerable health till about three years ago, when he was again seized with severe cough, sanguineous expectoration, and other alarming symptoms. On examination of the chest, a great contraction of the left side was observed, more particularly in the upper and anterior part; beneath which, on exploration, a cavity was detected, which had probably been in existence and unnoticed since his first attack. Febrifuge, demulcent, and sedative treatment, followed by inhalation, were recommended, and the result was highly satisfactory.

[Medical Times, *October* 8, 1842.]

Mr. Swain, between 50 and 60 years of age, a confidential clerk in the employment of Messrs. Betts and Co., was seized with influenza. About six months afterwards his lungs were pronounced to be tuberculated, and the case was considered hopeless. I was requested to see him. He had been recommended to leave town, of which I disapproved, as his legs were dropsical, and the breathing extremely difficult; he suffered from violent fits of coughing, during which large quantities of purulent matter mixed with blood were brought

up. A simple change of air could not remove such a formidable train of symptoms. Without entering into details, it is merely necessary to say, that the treatment was conducted on the principle of establishing a healthy relation between inspiration and expiration, and of meeting constitutional symptoms by appropriate medicines. In about three months he recovered, and resumed the duties of his situation, after an absence of nearly a year.

Mr. A., deputy-alderman of one of the wards of Cripplegate, being pronounced consumptive, was advised by his medical attendants to go abroad, and a strong opinion was expressed that he never could recover. He wintered in Nice, and returned home early in the ensuing summer. From inquiries into the case and its past history, it appeared that he had gone away having catarrh, and a cavity, and returned with the latter only, having lost his best protection. He was at this time preparing at night, and expectorating sanguineous purulent matter. The treatment chiefly adopted comprised the use of the mechanical powers; his chest expanded, the cavity healed up, and all the unfavourable symptoms gradually disappeared. Two years afterwards, he declared that he never had enjoyed better general health, and that all traces of his old disease had vanished.

A child, named Ann Cooper, about six years of age, residing near St. Bartholomew's Hospital, daughter of the sexton of St. John's Church, Clerkenwell, was brought to me suffering from a large accumulation of matter in the chest, which had made for itself an opening about two inches below the left nipple, and continued to discharge freely for several months, till she had lost at least two or three times her own weight. A cavity had been previously ascertained to exist in the summit of the left lung. No hopes of recovery were in this case entertained: the symptoms remained much the same for many months, till at length she was seized with measles, the result of which was, that the catarrh which accompanies this disease expanded the lungs; the chest, which before hardly measured twenty inches in circumference, in two months increased more than three inches, the discharge ceased, and she perfectly recovered.

[Medical Times, *November* 12, 1842.]

The next case I shall cite may be considered somewhat extraordinary, inasmuch as it was occasioned by an attempt of the patient to deprive himself of life by cutting his throat.

William Bell, aged 52, a coach-maker, entered the Infirmary for Diseases of the Chest, as an in-patient labouring under symptoms of catarrhal asthma, which had existed for some years, but which, until a short period before his admission, did not prevent him from following his daily avocations. He mentioned that, whilst labouring under a severe cough, perspirations, hæmoptysis, &c., he had been under professional care, and that the medical practitioners, after an examination of the chest, pronounced him to be consumptive. A short time previous to receiving this intimation, he had been induced to risk his entire savings upon a prize-fight, he himself having been a pugilist; but scarcely had it been announced that a vital organ was attacked by a formidable disease, than his fortune also received a shock by the defeat of the party on whom he had betted, and the consequent total loss of his property. The result was, that he committed the act of desperation before stated. This attempt to destroy life became, however, the means of prolonging it for ten years, for, by a series of phenomena thereby superinduced, the consumptive symptoms were dissipated.

Soon after, by surgical treatment, he recovered, and it became his practice to conceal the mark of the incision with a piece of flannel. Notwithstanding this ingenuity, the cicatrix sufficiently indicated the fact of his having attempted suicide. On examination, it was observed in breathing, that when the patient inspired, a slight protrusion took place where the wound had been—which was between the first ring of the trachea and the cricoid cartilage: and that, in the act of expiration, a small portion of the anterior part of the circle of the former passed within that of the latter. The impeded expiration, the result of the obstacle just mentioned, caused, in process of time, the lower lobes of the lungs to be exceedingly enlarged, which was perceptible by auscultation, as well as by ocular inspection of the chest. Beneath and above the clavicles there were, however, the marked depressions, such as

we find in consumptive persons. The action of the heart having been interfered with by the emphysematous state of the lower lobes, and displaced by the highly-voluminous condition of the inferior lobe of the left lung, he became dropsical, and entered the Infirmary as an in-patient. After various remedial attempts to relieve the gorged state of the venous system, and the visceral disorders, its never-failing consequences—aggravated not a little by former habits of intemperance—he succumbed to internal effusion.

In the early part of the treatment it was attempted to render the expiratory powers more effective by the mechanical process, so as to establish a normal relation between inspiration and expiration, or, in other words, to bring about the natural proportion that should exist between the windpipe and the lungs; but, in this case, there was a physical impediment, which no skill nor contrivance could overcome, for the first ring of the trachea was constantly in the way of the expired air.

Dissection of the body, a few hours after death, showed the upper lobes of the lungs to be contracted, indurated, and studded with innumerable tubercles of various sizes, generally small, and semi-transparent when divested of the black pulmonary matter surrounding them. Cicatrizations of different forms were also observable, and the investing membrane of the tuberculated summits was thickened, partly cartilaginous, and adherent throughout to the opposite serous surface. The other lobes of the lungs were hypertrophied and emphysematous in the highest degree. The alteration noticed in the contour of the chest is easily accounted for by the condition of the inexpansible summits of both lungs, and the greatly-enlarged state of the vesicular structure everywhere else.

This is an instructive case, as it illustrates the correctness of the opinion, that whatever serves to expand the lungs, removes the tendency to form tubercles, and alters entirely the scrofulous habit. Had the patient lived longer, the greater portion of the tubercles found on dissection would no doubt have disappeared by absorption. After the manifestation of catarrhal asthma, all the phthisical symptoms disappeared.

The following case will also be read with interest:—

Mrs. Levi, residing in Bevis Marks, and the mother of a large family of young children, had been for some months troubled with severe cough, purulent expectoration, hectic fever, and the other external signs of consumption. Her chest, which had undergone much contraction, was stethoscopically explored, and pronounced to contain a cavity of no small extent in the superior lobe of the left lung. Her life was therefore despaired of. A flattish substance of irregular form, between two and three inches in its longest extent, and which, from the absence of uneasiness, attracted but little attention, appeared somewhat above the upper circumference of the left breast, and adhered firmly to the muscles over the third and fourth ribs. When called in consultation, I satisfied myself that besides the constitutional symptoms of consumption, she had disease in the summit of both lungs, and a well-defined excavation, and I concluded that the indurated mass on the exterior of the chest was a tuberculous deposition.

Having prescribed for the most urgent symptoms, and advised inhalation, with a view of defeating further contraction of the chest, which, from long experience, I knew would be followed by fresh crops of tubercles in the lungs, as well as dangerous secondary affections, such as diarrhœa, ulceration of the larynx, &c., which so frequently follow the extension of the disease into the inferior lobes, I pointed out the possibility of a solution of the exterior tuberculous mass taking place. At the expiration of more than a month the tuberculated mass liquefied, and caused a sympathetic inflammation of the entire of the left breast, terminating in suppuration. To relieve the painful distension, and allow the escape of matter, a puncture of the breast was proposed, but the courage of the patient failed, and a postponement of the operation to the following day entreated.

The same night, under a sense of great difficulty of breathing, she felt something pass into her chest. This was instantly followed by an uncontrollable cough, and an abundant discharge of fetid expectoration. She continued coughing and expectorating, almost unceasingly, for ten hours, and brought up in this time more than two quarts of pure pus.

Regretting the result of her opposition to the lancing of the breast, she willingly submitted the next day to have it performed by one of the surgeons of Guy's Hospital. As soon as an incision was made near the nipple of the breast, a great quantity of matter, followed by air, rushed through the opening. The air came from the cavity in the top of the left lung, into which two quarts at least of purulent matter had spontaneously burst from the outside of the chest.

Two days after the surgical operation, upon carefully exploring the chest, it was obvious that the air, with some of the matter, emanated from the cavity, the existence of which had before been announced. It was singular to witness how, at the will of the patient, the aerial fluid escaped from the wound with a hissing noise! In a few weeks she ceased to discharge from the breast any kind of fluid; the respiratory murmur was considerably augmented, and the presence of a cavity no longer discernible. She afterwards gave birth to two children, and enjoyed good health: owing to the disease disappearing in the manner stated, she continued without any catarrhal complaint whatever.

This extraordinary and interesting case terminated favourably, in consequence of the free communication between the surface of the body and the cavity of the left lung, which, while it allowed the free escape of the air from the cavity, permitted a general enlargement of the pulmonary tissue to take place, which entirely obliterated the cavity.

[Medical Times, September 21, 1844.]

In all cases of consumption, the chief object of treatment should be to prevent contraction of the chest: the localities in which a prevention by nature often occurs are, as I shall have occasion to point out, various. Yet, in every variation, the antagonism to consumption is established by one ruling principle, viz., the re-adjustment of the deranged relation or balance between the process of inspiration and expiration, through the agency of something more or less obstructing the exit of the air in the act of expiration. Here let it be remembered, by-the-by, that Nature, in her operations under this law,

rarely does her work perfectly, and, in many instances, runs from one extreme to another. The forces which represent the powers of inspiration are stronger than those forces which represent the powers of expiration; consequently, when the impediment mentioned exists, owing to the weaker expiration, and the imprisonment of air, in some degree, an enlargement of the lungs takes place, and the cure of the disease is brought about.

No sooner does consumption begin, than it is sooner or later marked by contraction of the chest. The windpipe, by retaining its almost original size, becomes comparatively too large for this reduced compass; the exit of the air is too free to offer any opposition to the progress of the disease, which would be attended by the formation of new crops of tubercles, and their presence and subsequent liquefaction in the lower lobes of the lungs. It is interesting to observe, that when nature or art interrupts the daily contraction of the lungs, before the invasion of the tubercles in the lower lobes, we find little or no disposition in the larynx or intestines to fall into diseased action. The following are some of the simple and accidental processes which arrest the progress of the disease, and may be comprised under the head of—

Different ways by which Consumption is arrested by Nature.

Enlargement of the tonsils.

Diseases of the heart.

Tumours of any sort pressing on the windpipe, or its division.

Hysteria.

Asthma.

Catarrh, or bronchitis, symptomatic or idiopathic.

Polypi in the nose, or, indeed, any mucous intumescence in the same part, or nasal passages.

Hæmorrhage, or profuse, or too frequent bleedings from any part of the body.

Disease in the vertebræ of the neck, I have noticed, in more than one instance, to point beneath the pharynx, and constitute a tumour standing in the way of the expired air.

Enlargement of the Tonsils.

The great rarity of manifest consumption in children is owing to the enlargement of the tonsils, so commonly observable in them. The same strumous habit that gives rise to the foregoing state, previously deposits tubercles in the lungs. In the majority of such cases we have no opportunity of demonstrating their existence, owing to their re-absorption; but when, after a lapse of years, the patient has died of some complaint unconnected with any chest affection, we then discover, upon dissection, the black stains or some induration in the summits of the lungs, where they have been. It may be here mentioned, that even the greater number of adults who are seen with any degree of enlarged tonsils, can recollect, when only superficially questioned, that they had suffered under some previous affection, displaying all the constitutional symptoms of consumption.

As the greater power of the inspiratory muscles will, even under this state of enlarged tonsils, draw in the air with more freedom than it can escape, the preponderating action will, of course, expand the lungs, and, assisted by the weakness of the expiratory powers, imprison air sufficient to increase that expansion, and thus enlarge the chest; and, what is remarkable, by making the patient short-breathed or asthmatic, so completely alter the scrofulous habit, as to remove the very impediment, that is, the enlarged tonsils, which has the capability of defeating any contraction of the lungs that would lead to unmasked tubercular consumption. But it is still more extraordinary, that the enlargement of the tonsils alone is sufficient to render the lungs voluminous, and to close up a cavity resulting from liquefied tubercles. Enlarged tonsils, therefore, indicate a scrofulous habit, and that the lungs are, or have been, tuberculated; but this enlargement is, at the same time, to be considered a sign that the patient is not so liable to sink under consumptive disease.

Diseases of the Heart.

In all lesions of the heart, as before stated, there is to be found congestion of the venous system; and the bronchial

mucous surface is in a greater or less degree tumefied, owing to the difficulty which the bronchial veins experience in transmitting their blood into the larger venous trunks destined to receive it. The consequence is, that imprisonment of air is effected after the manner already explained, and the lungs become voluminous. Though tuberculous deposits may have previously taken place in the top of one or both lungs, the disposition to form new ones is averted by this enlargement of the lungs, which I have more than once described to be unfavourable to the continuance of the scrofulous habit, or entirely subversive of it. Pathological researches clearly establish the coexistence of tuberculous disease with scrofula. Nor, indeed, is this all: aneurysm of the aorta, or of any large artery, is often the result of previous tuberculous disease, which has impaired its power of resisting the impulse of the circulation. Dissection has proved to my satisfaction that this is the fact, and that there existed, at one period or another, in such cases, a tuberculous disease of the lungs.

[Medical Times, *January* 7, 1843.]

Diseases of the heart, accordingly, form one class of the antagonisms of which Nature avails herself against the invasions of consumption. The frequency and variety of heart affections, and their important bearing on the malady under consideration, will, I trust, justify my entering a little further into details. That tumefaction of the mucous membrane lining the bronchial tube occurs in all cases of disturbance of the central organ of circulation, is capable of demonstration, and will, I presume, at once be conceded. The manner in which this tumefaction arrests tuberculous deposits has been already explained. Disease of the heart, however, will sometimes be found coincident with consumption. In such cases, the formation of tubercles precedes the cardiac affection. It may be safely laid down, as a general rule, that where the affection of the heart is primary, the strumous diathesis does not exist. In the majority of cases, where the former is subsequent in point of time, the latter is either arrested and cured, or masked and rendered stationary and quiescent. It may not be uninteresting

to add that persons who undergo tuberculous liquefaction when the heart is affected, sometimes do not exhibit the ordinary symptoms of consumption. This is particularly the case, as far as regards perspiration. When we find a patient with lividity of the lips, permanent distension of the jugular veins, dyspnœa, and abnormal action of the heart (without entering into auscultatory minutiæ), we must not hastily pronounce an unfavourable opinion; for if these symptoms be moderate, such a patient may, under proper treatment, survive many years. Nay, even physical deformity has, in some cases, a prophylactic tendency. The remarkable exemption which gibbous or hump-backed persons enjoy from the fatal effects of tuberculous disease is very observable; which is a singular fact, and not unworthy of attention. It may be readily accounted for by the displacement of the heart: consequent mucous intumescence, and an inflated state of the lungs, to which the deformity of the chest, in a great degree, contributes. Again, has any practitioner met with a case of simple and genuine chlorosis terminating in consumption? In this malady, there is always some functional disturbance of the heart, which antagonises the disposition to tuberculous deposit. A popular notion prevails, that females affected with chlorosis are either consumptive or likely to become so. It cannot have escaped general observation, that debility is often the precursor, and always the attendant of consumption.

When the meridian of life has been for some time passed, primary deposits of tubercles are of very rare occurrence. The disease, if met with, will be found to have had its origin at some anterior period. At and after this time of life, there is a venous preponderance producing venous intumescence: this is, however, not necessarily so considerable as to superinduce catarrh, but sufficient to prolong the expiratory act, a sure sign of obstruction somewhere in the respiratory organs. The practised auscultator will readily detect the prolonged expiratory murmur. From this we may deduce, as a corollary, that a certain amount of disease has the effect of prolonging life to the full term of its natural duration. Even our winters, by causing suppressed cuticular secretion, internal venous con-

gestion, and mucous intumescence, &c., have a share in impeding the advance of diseases that, otherwise, would have had an earlier fatal termination. If climate has its bane, it has also its antidote. Looking at the question in the light in which I view it, the very variableness of the temperature, so far from increasing the amount of mortality occasioned by consumption, actually diminishes it.

Tumours of any sort pressing on the Windpipe or its divisions.

These are useful agents in the hands of Nature. The first which may be noticed is bronchocele. The mechanical pressure of this kind of tumour is sometimes lateral, and sometimes in an antero-posterior direction, according to the form and place of the enlargement. The amount of obstruction determines the amount of pulmonary expansion, vesicular emphysema, and dyspnœa. I appeal to the experience of every skilful practitioner, whether he has ever witnessed a case of fatal phthisis in a patient labouring under bronchocele? No cavity can exist in the lungs, in the face of such an impediment. Let me again repeat here that the contraction of the windpipe prevents the free egress of the air—imprisons it in the air-cells, and makes the lungs excessively voluminous, that is, though the bony frame of the chest be pushed outwards in every direction, and the convexity of the diaphragm diminished, yet the expanded lungs not only fill up the additional space thus gained, but would occupy more if obtainable. How is it possible that, under these circumstances, an excavation can exist in the lungs, or that small cavities, formed by the recent solution of tubercles, from some accidental affection, should not be rapidly closed? These cavities may be formed from tubercles which had been latent for years, but could not progress, nor could a new crop arise in this expansive state of the pulmonary tissue.

Enlargement of the thymus gland has a similar effect in protecting children from early tuberculous deposits, and many adults refer their dyspnœal affections to an attack of croup in infancy, which, I may observe, is almost always produced and kept up by irritation, from the mechanical pressure of the

enlarged gland acting as a foreign body. When children survive this affection they are generally short-breathed, and protected against consumption in after-life.

A congeries of scrofulous tumours is occasionally formed at the root of the lungs, or, in some rare cases, so as partially to embrace the windpipe, diminishing its diameter and acting as before described. Aneurysmal tumours are powerful antagonists to consumption. I have now in my possession a pathological specimen of aneurysm of the aorta, protruding at the point where the trachea bifurcates into the bronchi. The case was operated upon by the late Mr. Earle, in the presence of Dr. Ashwell and myself, to relieve suffocative dyspnœa.

The operation was admirably performed; the patient, however, died; and it appeared on autopsy, that the opening had been made above the seat of the obstruction, which lay at the bifurcation of the trachea. The lungs exhibited the usual traces of a previously well-marked phthisical condition: arrested, no doubt, by the intervention of the tumour.

Among the other obstructions worthy of note, I may mention enlarged bronchial glands at the root of the lungs, and along the course of the principal bronchial ramifications; and calcareous deposits in situations where tuberculous matter had previously existed, but had either made its escape or became absorbed.

[Medical Times, August 14, 1847.]

Hysteria.

Individuals belonging to consumptive families, labouring under this affection, are rarely susceptible of tuberculous deposits. Hysteria has the remarkable effect, as may be frequently observed, of giving more or less roundness and fulness to the chest, according to its degree of severity, and the length of time it may have lasted. Spasm of the membranous portion of the trachea is the main cause of the laborious and irregular breathing. The air being forcibly drawn in, and retained, distends the air-cells:

this, together with the spasmodic action of the diaphragm, reduces the convexity of that muscle, thus enlarging the capacity of the chest; and the frequent occurrence of the paroxysms, with the long establishment of the hysteric habit in the system, ultimately leads by these means to permanent enlargement of the lungs, and expansion of the walls of the chest; it being a well-known fact, that the latter contract or expand in the same proportion as the lungs. To these I may subjoin all those who are affected with diseases of the convulsive kind, such as epilepsy, or, indeed, any state in which a prolonged or forcible retention of the breath is frequently observed. In hysteria of any considerable standing, the neck is rounder and fuller than usual, and becomes in some degree hypertrophied, both in the muscles and the integuments. The sterno-cleido mastoid muscles, in some cases, become so large towards their sternal insertion as to exert a lateral pressure on the trachea, a little above the sternum; thus offering a permanent mechanical impediment to freedom of respiration. In aggravated cases of epilepsy patients rarely die of consumption, for the reasons just mentioned.

Asthma.

The several varieties of this affection act in the way already described: viz., by enlarging the air-cells, which they do more or less permanently, according to the frequency and duration of the paroxysms. Even in those cases of pure or idiopathic asthma, where the intervals between the attacks happen to be long, leaving time for the lungs to return to their previous dimensions, a certain amount of protective effect is gained. Indeed, I have never known an instance of pure asthma succeeded by consumption. This I should suppose, *à priori*, would be the case, inasmuch as the exercise and expansion of the lungs, though occurring with comparative infrequency and of short duration, can scarcely fail to exert an influence sufficient to alter the scrofulous habit, and preserve the lungs from tuberculous deposits.

Asthma has the effect of taking away the perpendicularity of the windpipe. The *pomum Adami* in males becomes exceedingly prominent, and in both sexes the inferior part of

the trachea is retarded—sometimes to a remarkable extent. The inspection of the front of the neck will frequently enable us to form an opinion of the state of the lungs, and constitutes no mean addition to the number of our diagnostic signs in certain forms of thoracic disease. I may here observe, that in this affection the principal seat of spasmodic contraction is the membranous portion of the trachea, forming its posterior boundary.

An interesting case, illustrative of the antagonistic power of actions in consumption, occurred seven years ago in the Infirmary for Diseases of the Chest. James Walford, a pipe-maker, labouring under consumption, was admitted as an inpatient: he displayed, unquestionably, all its auscultative signs and constitutional symptoms. He had, moreover, ulceration of the pharynx, which, notwithstanding suitable local applications, extended itself downwards. All, on reaching a certain point, asthmatic convulsions of a most violent description took place. A stridulous mucous rale was heard in the windpipe; the lungs became suddenly and enormously emphysematous, and the difficulty of breathing almost intolerable. The asthmatic confusion lasted, with few intermissions, for some months, and disappeared only when the pharyngeal ulceration was healed. During this period, from the very commencement, no consumptive symptoms had shown themselves. The nocturnal perspirations, &c., ceased altogether, and did not return. He was seen by several medical gentlemen at the Institution, and among them were some highly-intelligent American physicians.

The following case will also be found interesting. A patient, who had been previously under treatment for consumption in the Middlesex Hospital, presented himself at the Infirmary for relief from severe catarrhal asthma, which, it appeared, had for some time masked the consumptive symptoms. The regulated temperature of the atmosphere of the ward, together with the medical treatment, soon removed all mucous irritation, and with it the spasm. He was discharged cured, and remained free from asthma and consumption for 17 years. Within this period, however, he had had an attack of insanity, and latterly his habits became drunken and dissipated. Being

refused admission into St. George's Hospital, as his was regarded as a case of hopeless consumption, he again applied to me for advice, but it was too late—he died a few days afterwards.

Here was a total absence of all asthmatic interference for a very long period, possibly, in some degree, owing to the attack of insanity, which sometimes has a tendency to suspend asthma. Had the asthmatic affection recurred at intervals, the return of the consumptive state might have been prevented. From the whole, I would draw the conclusion that symptomatic asthma, once developed, being in some instances a curable disease, does not necessarily imply that the individual so affected may not, at some period, die of consumption. When a cure of this species of asthma takes place, the system is almost in its former state, so far as liability to consumption is concerned. In the case above related, it is probable that the man's intemperance and depraved habits had so far weakened his system as to bring on contraction of the chest, from want of power in the muscles of inspiration to elevate the ribs, or that new tuberculous deposits took place, or that old ones became liquefied, or perhaps both; subsequent to which a cavity was formed, and the disease terminated fatally. I should here add, that the asthmatic state in the first instance was of very short duration. I find, after a complete cure of asthma, that a return of the phthisical disease is rare.

Catarrh or Bronchitis.

Symptomatic or idiopathic catarrh or bronchitis, in all its phases and varieties, is attended with more or less bronchial intumescence. By catarrh, I understand irritation of the mucous membrane of the air-passages, in any part of their extent. It is either latent or manifest, mild or severe. In its mild or latent form it may happen to be unaccompanied by either cough or expectoration, and can only be detected by the ear. The easy, soft, downy murmur of natural respiration, degenerates into a coarse, heavy breathing, with prolongation of the expiratory act. Between this and its aggravated forms there are various gradations in

the scale, but the transition of latent catarrh, if of any considerable duration, is sufficient to antagonize consumption.

Perhaps there is no morbid affection more common in this climate than catarrh, particularly in cold and damp weather. It is symptomatically present in most chronic diseases of the heart and lungs, in all febrile affections, and in numerous cases of impaired constitution. When irritation of the trachea takes place, or spasm of its posterior membranous portion, it is propagated downwards by continuous sympathy. But for the intervention of this complaint, the mortality from consumption in Great Britain and elsewhere, already so considerable, would be two-thirds, at least, more than doubled. Laennec, with all his acumen and experience, with the proofs daily presenting themselves before him, never, as I have already remarked, arrived at this simple and important discovery. He combated, along with Boyle and others, the doctrine of the old schools, that it was one of the causes of phthisis, but most unaccountably overlooked its preservative influence. He has recorded cases of persons with chronic catarrh who lived to an advanced age; he had an opportunity of examining many of them after death, and observing the traces of old tuberculous disease, either cured or rendered quiescent, and yet never even so much as suspected the inherency of any preservative power in catarrh, thus verifying the old adage, "Non causa pro causa."

One of the circumstances which contributed to the erroneous supposition that catarrh is one of the causes of phthisis is, that the two are often found coincident. We are, however, more liable to set down a case of phthisis for catarrh, than the latter for the former. When there are small incipient cavities, separated by healthy pulmonary tissue, or small disseminated tubercles with or without yellow points, the ear, even that of a practised auscultator, may not be able to detect any positive evidence of the morbid phthisical action commencing in the lungs. The best guide we have in this unsatisfactory state of things, is the absence or presence of excessive perspirations, in the night or morning; and this will enable us to discriminate in all cases, excepting a few complicated with affections of the heart. When these are present, the individual is decidedly consumptive. Inattention to this

symptom too often leads to a false diagnosis, even with some high authorities: the patient is pronounced catarrhal only, his apprehensions are disarmed, and he rests for a time in the enjoyment of a false security. This important symptom is overlooked or undervalued, because the auscultatory signs are either absent or obscure. Auscultation, under such circumstances is purely speculative. The perspirations, though with many a discarded symptom, will, as I have said, in almost all cases, alone enable us to decide correctly.

I find frequently that I am applied to for advice in such cases when it is too late to repair the mischief; and all that is left for me to do is to pronounce the melancholy fact of the real character of the disease, and, when permitted, to verify, by autopsy, the correctness of this prognosis. In the latter stages of consumption, catarrh is always present, arising, probably, from extension of the inflammatory action in the substance of the lungs to the lining bronchial membrane, but it comes too late to arrest the disease.

Assuming that general debility is the grand cause of tuberculous deposits, it may be asked why convalescents from fever do not necessarily become consumptive? The answer is furnished by the coexistence of catarrh, either latent or manifest, defeating contraction of the chest, and the consequent deposits of tubercles.

Acute or inflammatory catarrh, independently of the direct danger to which it exposes the system, sometimes brings on a rapid and simultaneous liquefaction of pre-existent tubercles; and, though its own course may be arrested, the patient may die of galloping consumption. Influenza frequently proves fatal in this way, when severe. Like mercury, it quickly matures all crude tuberculous deposits, and if these be large and extensively distributed through the pulmonary tissue, their general and speedy solution is too much for the powers of nature, and the patient sinks. If, however, the deposit be small and partial, and the inflammatory affection moderate, the elimination of the morbid matter is often followed by a cure, more or less complete and lasting, but generally entailing a catarrh or bronchitis.

[Medical Times, January 21, 1843.]

Polypi.

Polypi, or any mucous intumescence, in the nasal fossæ, obstruct the free egress of air in expiration, and produce effects similar to those already described. A chronic thickening of the mucous membrane of the nose may often be observed in children of a strumous habit; and the amount of obstruction from this cause, or from catarrh, although apparently insignificant, rarely fails to operate as a check on the progress of consumption. The mechanical impediments presented by the presence of polypi are sometimes so considerable, as almost to preclude the possibility of breathing through the nostrils, and they are seldom so slight as not to embarrass it in some degree. Persons who sleep with their lips closed, or who labour at the same time under contraction of the posterior nares, or in whom the uvula, or soft palate, is preternaturally enlarged, necessarily make prolonged expirations, which in consumption cannot fail to have a beneficial tendency. It is not necessary in this place to do more than allude to the other morbid conditions of this vestibulary portion of the respiratory apparatus and its adjacent structures—such as lupus, eczema or disease of the antrum, congenital malformation, &c., which will be found to act upon the same principle of narrowing the passage, and preventing the easy exit of the inspired air.

Hæmorrhage.

Profuse or too frequent bleedings from any part of the body, occasioned by an irregular state of the heart's action, exercise a greater or less control over the progress of consumption. Hæmorrhoids, or sanguineous fluxes, from any part of the portal system, menorrhagia, epistaxis, hæmatemesis, and immoderate loss of blood from venæsection or accidental injury, are all followed by disturbance of the circulation at its centre, and turn-fraction of the bronchial mucous membrane. Hæmorrhage from the lungs, the result of lesion of these organs, and when profuse, indicating an alarming state of pulmonary disease, often forms an exception to this rule; yet,

under favourable circumstances, when very moderate, if followed by bloodletting in small quantities, and often repeated, by lessening the *vis a tergo*, it may be devoid of danger, and tend to modify the character of the tubercular depositions. This is a practice, however, to which I seldom have recourse. In fact, the practice of venesection must in all cases be resorted to with extreme caution. The heart, like every other muscular part under great loss of blood, gives way: and, as Corvisart expresses it, falls into a state of passive aneurysm. Great care should be taken not to reduce it to such a state as may superinduce general debility. Some of my pupils may remember the cases of Susan Thomas, aged 30, and Elizabeth Good, aged 22, who were patients in the London Hospital. The former was bled 50 times, by order of a physician of that establishment; the latter was bled 57 times, and in the course of four years had 450 leeches applied, and was repeatedly cupped. They had previously exhibited symptoms of consumption, in which the cardiac symptoms had subsided: but from this great loss of blood they became excessively plethoric, and a state of cerebral congestion, with frequent hæmorrhage from the nose, stomach, and bowels, were the results of this treatment. The physician (long since deceased) had been a surgeon in a militia regiment, and seemed to forget that bold military practice was not exactly applicable to delicate civilians.

An interesting case of uterine hæmorrhage, complicated with consumption, occurred some years ago. Mrs. H., a lady from Sheerness, presented the following symptoms:—There was old phthisical disease in the summit of both lungs; the want of clearness in the respiratory murmur was most obvious in the infraclavicular region of the right side; the right was more affected than the left lung, in which there was chronic disease, where it comes in contact with the pericardium. The general or constitutional symptoms of consumption were never well marked, owing to uterine hæmorrhage some three years previously, which had been exceedingly profuse. Dilatation of the heart followed, as well as a tumefied condition of the bronchial mucous membrane. Owing to the imprisonment of air consequent upon this

change, the lower pulmonary lobes were preserved from contraction, and thereby remained in a state less liable to any new tubercular deposits. Under the plan of treatment already described, this lady improved, much to the surprise and satisfaction of her friends, and returned home comparatively well.

[Medical Times, 4th February, 1843.]

The treatment of consumption may be discussed under two heads—the mechanical and the medicinal. One great and leading fact forced on our attention by the symptomatology and pathology of consumption is, that Nature very frequently attempts and succeeds in effecting a partial and temporary, or perfect and permanent cure. The analysis which has been already given brings us to the discovery of the agencies employed, and a little further consideration conducts us inevitably to the conclusion that they all act in one way, namely, by expansion of the lungs. But we find that in producing this effect, Nature sometimes oversteps the bounds of expediency, and that she does evil in her restorative efforts. She frequently makes the expirations too prolonged, and fails in restoring the nice normal balance between inspiration and expiration. The evil is either equivalent to the good done, or it is less; greater it would be hard to suppose. The business of art, therefore, is to diminish or prevent the evil effects of her operations by judicious control or assistance, and, if possible, to accomplish her efforts by an agency similar to her own, and not liable to its objections.

The expansion of the lungs may be effected to a certain extent by exercise, and there are certain species of exercise which expand them more than others. This prophylactic operates both generally and locally; it invigorates the body and the mind, thus obviating debility, which is the great cause of tubercular deposition, and by stimulating the lungs to deeper and more frequent inspirations, increases their volume and gives enlargement to the chest.

Sea voyages, land journeys, riding, running, swimming, &c., and whatever sports or employments exercise the pul-

monary tissue, prove beneficial. In trotting, which is the best species of horse exercise, the increased movements of the trunk on the saddle are followed by a proportionably increased descent of the diaphragm, which gives the lungs more space for expansion, particularly the lower lobes, on the integrity of which so much depends.

The increased exercise of the lungs themselves is advantageous on the same principle as in other tissues. The muscles of voluntary motion, from their frequent action, are very rarely indeed the seat of tubercles. The lungs, as a general rule, may be stated to be first affected in the parts where least motion is allowed, viz., the upper lobes. The lower, from their proximity to the yielding and descending diaphragm, and the greater arches of the ribs, are less interfered with in their motions, and therefore less liable to become diseased, unless where there exists some adhesion to restrict their expansibility. In sea voyages or new localities, the action of the lungs is deeper and fuller, from the stimulus of the unaccustomed atmosphere. The increased pulmonary action, and consequent improved sanguification, may be regarded as the causes of the amelioration we observe effected by changes of locality in convalescence. As the employment of general exercise is sometimes forbidden by circumstances, or in some cases may not be practicable to any great extent, we must have recourse to other means of exercising the pulmonary tissue, and expanding the air-cells, surely, steadily, and directly. In order to accomplish this, let us endeavour, after the manner of Nature, to prolong the expiration. This can be done by a very simple contrivance. Let a tube be constructed, so that when breathed through, backwards and forwards, the air will be inspired more easily than it can be expired. The impediment offered to the expiration need not be considerable, and can be graduated. A common quill, being larger at one end than the other, will answer the purpose tolerably well. But it is better to employ a tube nicely constructed on the principle already laid down.

It may here be observed, that the effects of prolonged expiration are the same, whether produced by natural causes or mechanical experiments: these are, imprisonment of the air

in the lungs; distension of all the permeable air-cells; increase of the pulmonary volume; enlargement of the cavity of the chest, from the pushing out of its walls in every direction by the expanded lungs; approximation of the surfaces of cavities, from pressure on all sides by the pulmonary tissue external to them: union of these surfaces,—if early, by a soft membrane,—if late, by a semi-cartilaginous intervention, &c.: arrest of the tendency to fresh tubercular deposition from exercise and full expansion of the structure of the lungs, and a state of inactivity or quiescence more or less complete of the tubercle already formed and undiminished, they being surrounded by black secretion, isolating and often enclosing them innocuous. Such are the effects of prolonged expiration in favourable cases. The great comparative advantage of the tube over nature lies in the following circumstances. It is capable of being so made that we have neither more nor less prolongation of expiration than is exactly necessary; it can be taken up and laid aside at pleasure, so that the lungs when fatigued with this mechanical exercise may have repose; it can be persevered in for any desired length of time, and abandoned when no longer necessary, or when contra-indicated by the supervention of some incidental malady or symptoms. It is, in short, an instrument completely at our command, simple in its mode of operation, certain and safe in its effects. This may be properly called the mechanical mode of treating consumption. No medicated vapours are required. The common atmospheric air, the elasticity of which is an essential requisite, is sufficient. We have no occasion for the fumes of tar, iodine, chlorine, hemlock, turpentine, &c.

Simple as this instrument is, its power is greater than can be appreciated by those who have not used it. Let it not be despised, on account of its apparent simplicity as being incommensurate with its real pretensions.

When Naaman, the favourite minister of the Syrian monarch, applied to the prophet of Israel for the cure of his leprosy, he was ordered to wash in the waters of Jordan, but fretfully exclaimed, "Are not Abana and Pharpar, rivers of Damascus, better than all the waters of Israel?" His ser-

vants, more wise, reminded him that it was but a little thing the prophet had commanded. He bathed in the waters as ordered, and his leprosy was removed. So would I counsel those who at first may treat this simple instrument as insignificant. The difficulty in making the experiment is inconsiderable; give it a trial, and though no pretensions can be regarded as infallible in their accomplishment, success exceeding the most sanguine expectations will be realized.

There are, however, certain rules which should regulate its use; viz., the stages, symptoms, and complications of consumptive disease in which it is more or less to be had recourse to, or for intervals longer or shorter suspended. These it is essentially necessary should be well understood, and shall be explained as we proceed.

[Medical Times, 18*th February*, 1843.]

All attempts to place the treatment of consumption on a satisfactory medicinal basis have hitherto signally failed. The animal, vegetable, and mineral kingdoms have all been laid under contributions to supply prophylactics and curatives. Demulcents, expectorants, emetics, sudorifics, narcotics, tonics, astringents, balsamics, &c., all have been combined in formulæ of endless variety, congruous and incongruous, scientific and empirical, but without any good effects.

Hence Laennec commences his chapter on the treatment of consumption, by commenting upon the unsatisfactory nature of the remedies usually prescribed. Fashion has suggested a variety of nostrums, which had each in its day enjoyed a transitory popularity, and then been quietly consigned to oblivion. The most conflicting and contrary methods have been adopted; acids and alkalies have been alternately recommended; spare diet, and rich animal food; dry air, and moist air; pure air, and fœtid air; oxygen, hydrogen, and carbonic acid; exercise, and quiet; emollients, and tonics; heat, and cold; paregorics, anodynes, and stimulants not only of the aromatic and antiscorbutic kind, but even the most irritating preparations of mercury; the sulphate of copper, arsenic, &c.

Happily the pathology of the disease being now better understood, our method of treatment is placed on a more certain basis; and while, in many cases, special medicines may be administered with advantage, the value of exercise, particularly such as bears more immediately upon the lungs, cannot be too highly appreciated. The principle, however, of its beneficial operation appears hitherto not to have been well understood, that is to say, the importance of giving expansion to the pulmonary tissue. Neither perfect recovery, nor indeed exemption from the danger of a relapse into a consumptive state, can be relied on, except in very rare instances, unless the pulmonary organs become naturally or artificially voluminous. By medicine alone this effect cannot be produced, and as long as we exclusively confine ourselves to it, disappointment will inevitably ensue; there is no alternative; the lungs must be expanded by some means, and these are obviously at our command in the process of artificial respiration, mechanically regulated by the construction of the respiratory tube.

Diminution of the pulmonary volume and contraction of the chest are always found together, and have a reaction on each other. The moment the chest begins to contract from inadequacy of power in the respiratory muscles, — the result of debility, no matter how superinduced, — that moment also the lungs begin to contract, and die away. The area of the great air-passage remaining nearly the same, while the capacity of the lungs is diminished, subverts the normal relation between the inspiratory and expiratory powers, and renders the expiration too easy. The consequence of this contraction, viz., diminished activity and disturbed balance, is the deposition of tubercles primarily in those parts of those organs, which, from their locality, possess least expansive power. Auscultation and autopsy concur in leading us to this conclusion. The evil once commenced, multiplies itself; the dissemination of tubercles at the summits of the lungs propagates irritation to the adjacent pleura pulmonalis and pleura costalis, and leads to adhesion. The deposits in this site are very common. In the majority of adult *post-mortem* dissections, we find either tubercles or

black stains, or dark oval indurations of the pulmonary tissue remaining after absorption: unless some stop be put to the progress of pulmonary contraction, a second crop succeeds to the first, and the morbid deposits go on, if not cut short by dissolution, till at length the lower lobes are involved. This increasing encroachment on the lungs by tubercles proportionally diminishes their expansibility. Even in health, owing to the various motions and positions of the body, the entire extent of the air-cells is seldom fully dilated; how much more must this be the case under tuberculous dissemination?

The altered form of the chest, as it gradually departs from the healthy standard, is a true index of the morbid changes going on internally. In consumption there is generally a wide intercostal space; the convexity of the ribs inclines more downwards than in health, and the lateral defences of the chest appear greatly lengthened; the sternum is either perpendicular, or drawn downwards and backwards, increasing the usual elongated appearance of the neck; the chest, losing its arched contour, becomes flat: from the sinking of the ribs, a marked depression is seen both above and below the collar-bones, and the shoulders come forward, giving to the shoulder-blades a wing-like form; all combining to contract the chest round the collapsing lungs. Now in asthma we have a similar coincidence exemplified by contrast. The lungs being preternaturally expanded, the chest also becomes so; some of the muscles of the neck are hypertrophied and unusually firm; a hollowness is seen above the sternum owing to the retraction of the trachea and advancement of the larynx; the shoulders are raised, the patient stoops, and unless there have been previous pleuritic adhesions or contractions from tuberculous disease at the summit of the lungs, there is no depression above or below the clavicles; the sternum advances forward in its entire extent; the arches of the ribs tend upwards, so as to give the chest a rounded, full form, adapting the capacity of the thorax to the voluminous state of the lungs. By regulating the respiration, we bring both the chest and the lungs to the normal state, which lies in the middle between these two extremes. Even as early as a month from the

commencement of the use of the respiratory tube in young consumptive patients, it becomes occasionally necessary to let out the clothes round the waist. The following case will give some idea of its power over the structure of the chest.

The Rev. J. M. Hone, late chaplain of the City Hospital, New York, consulted, without deriving any benefit from their advice, some of the most eminent physicians in France, and also in this country, and was, from the progress of consumption, reduced to a state of almost hopeless prostration. Upon the principles now recommended he made use of the inhaling tube, and was placed under the medical treatment adapted to alleviate concomitant symptoms. He very rapidly improved, and eventually recovered. His own account of the changes in the form of the chest appears in an American publication, dated 1839. He says, "The shape of my chest is astonishingly improved and enlarged. About six years ago, the measurement of my chest close under the arms was thirty-two inches; but for the two years following there was a gradual diminution, so that for three years previous to my getting the tube, my measurement was thirty inches, making a decrease of two inches; since using the tube, I have increased in size two and a-half inches, making my measurement now thirty-two and a-half inches. But the alteration in the conformation of my chest is truly wonderful. The collar-bones were very prominent, and the chest so drawn together, that I was afraid to see myself in the glass. Now my chest has recovered a round and plumper appearance, and my neck is filled out, so that the conformation is better than it had been for years."

In a letter subsequently published, he mentions the names of several clerical and other friends who made use of the tube by his recommendation, for relief from catarrhal asthma and consumption. In some of the former, the disease had gone so far as to deprive the ribs of mobility; and in the latter, the chest had undergone various degrees of contraction. The mechanical respiration steadily persevered in, had the effect of imparting mobility to the chest in the asthmatic, and expansion of the chest in such as were phthisical.

Some time ago I received a letter from another American

gentleman, who states that having employed the inhaling tube as recommended by me, at a time when the chest was contracted, and his flesh much wasted, he gained under the use of the tube, forty-one pounds in weight, and some inches in the size of his chest. He had been recommended to go to Madeira, but in deference to my advice he remained in London, and found the advantage of doing so; as, indeed, many others have who consulted me, and who had been ordered abroad, but remained at home and recovered under my treatment. Here it should be observed, that although the use of the respiratory tube has, in consumption, the effect of enlarging the pulmonary volume and the chest, it is not to be inferred that there is any danger of its being carried so far as to bring on an emphysematous or asthmatic state of the lungs.

It may be asked, why is consumption so prevalent among musicians who perform on wind instruments? The answer obviously is, because they make several successive expirations to one inspiration. This is in direct opposition to the natural function of respiration, and also to the mechanical process as regulated by the respiratory tube, and therefore producing effects directly the reverse, contracting the chest and diminishing the size of the lungs. On one occasion I was consulted by the leader of a band, on behalf of himself and fellow-musicians, as to the best method of counteracting the effects of this irregular breathing, and I recommended that they should all take a long and quick run immediately after the close of their performances, or provide themselves with a tubular walking-stick, constructed on the principle of the respiratory tube, and respire through it at proper intervals. This was followed by the best effects. Thus upon examining an objection which apparently militated against my views, we find that in reality it constitutes an indubitable confirmation of their truth.

Many instances of consumption are supposed to occur among females who habituate themselves to the use of very tight stays or corsets, a practice against which many medical men of high repute have long declaimed. The confinement and stooping attitudes of young persons in counting-houses, manufactories, and various kinds of mechanical occupations,

and thousands prematurely to the grave, and sow the seeds of disease, the fruits of which are sure to be reaped by future generations. All these preceding effects may be accounted for upon the simple principle I have laid down,—contraction of the chest, and want of due pulmonary exercise.

The North American Indian, in the humid atmosphere of his boundless forests, exposed with very imperfect coverings to the rigours of variable and inclement winters, almost uniformly exhibits symmetry of the chest and a sound state of the lungs. It is only by contact with the habits of civilized nations that he suffers from the invasion of the malady, which desolates the regions we inhabit.

[Medical Times, January 25, 1845.]

When we consider the exquisitely-fine gossamer-like tissue of the air-cells, their prodigious number, and immense extent of surface, we need not wonder at the facility and certainty with which they can be expanded, and the important changes consequent on the attainment of this object. The free and ample exposure of the blood to the atmospheric air, is necessary to prepare it by arterialisation for the nutriment of the system; and in proportion to the extent of the air-cells impaired, will the sanguification be imperfect, and the due evolution of the animal heat interfered with, on which the healthy action of all the vital organs so much depends.

The following cases corroborate those already adduced, in proving the power which pulmonary expansion exercises over consumption:—

M. Lebeau, physician to the King of the Belgians, and principal physician to the military hospital at Brussels, in the preface to his translation of my work on consumption, mentions, that having long devoted his attention to this disease, he has been himself struck with the conviction that asthma has the power of arresting as well as preventing it; and that he could cite a considerable number of cases in illustration of this statement, but confines himself to one of recent date, and complete in its details.

M——, aged 48, a captain in an infantry regiment, presented himself at the military hospital at Brussels, with a view to obtain a certificate to exempt him from active service, in consequence of habitual difficulty of breathing. He complained of no other ailment, and was of full habit; his chest was of remarkable amplitude; wheezing and the sibilant râle were heard over the whole thoracic region; the heart's action was regular and moderate, the pulse quiet and natural, and the face exhibited no signs of venous congestion. He gave the following account of his case, in the presence of Dr. Combe, of Edinburgh, who happened to be there at the time, of Drs. Limauge and De Biefve of Brussels, and several pupils:—"In 1816, after severe fatigue, I was attacked with cough and copious expectoration, wasted away rapidly, and was subject to shiverings in the day-time and perspirations at night, with wandering pains below the collar-bones. My medical attendants repeatedly assured me I was consumptive, and could not long survive. While matters were in this state, I was seized with a difficulty of breathing, to such a degree as to oblige me to get out of bed at night, and repair to the window to breathe fresh air. From this period my strength began to return, the perspirations ceased, and I soon became of as full a habit as you now see me. My chest which was flat and contracted, enlarged in an extraordinary manner, and I was completely cured, save the difficulty of breathing, for which I could obtain no remedy."

M. Lebeau adds, that Dr. Canstatt, a young physician of great merit, had related to him a similar and strikingly illustrative case which had occurred in his own family.

Among other remarks worthy of attention in Mr. Lebeau's preface, he makes the following very interesting and curious one:—"Taking into consideration all the circumstances preceding and accompanying this disease, and the appearances after death, I have had the most satisfactory evidence that the compression on the upper part of the chest of young soldiers, caused by the weight of the arms and accoutrements, has contributed very much to the occurrence of consumption.

The following cases are submitted as additional examples

of the benefits derivable from pulmonary expansion by measured mechanical respiration:—

Miss ——, aged 23, the daughter of a Member of Parliament, was attacked by consumption, displaying itself in the usual manner by cough, expectoration, nightly perspirations, and gradual emaciation. A few months after its commencement, one of her tonsils acquired considerable size, and coincidently her symptoms showed signs of amendment. This tonsil, after a short interval, suppurated, and the signs of amendment soon disappeared. Her relatives now began to entertain serious apprehensions, more especially as she had lost a brother and two sisters by consumption within a few months. When consulted, I felt satisfied upon examination and inquiry, that disease had commenced in the right lung, and been interrupted by the enlargement of the tonsil. It was also evident that it now existed in the summit of the left lung. The chest was flat and contracted, both the collar-bones very prominent, and the infra-clavicular depression on the left side remarkable. The constitutional disturbance and preternatural heat of the chest were reduced by the application of a few leeches occasionally between the second and third ribs of the affected side, and the administration of nitre and tartarised antimony, &c. Tonics and sedatives also were prescribed, to support the system and allay irritation. The patient, however, was taught to place her chief reliance on the artificial respiration, and not to expect results in a very sensible degree sooner than a month. By perseverance in the use of the inhaling apparatus, her strength gradually returned, the appetite improved, the nocturnal perspirations ceased, the quality of the matter expectorated was amended, a satisfactory respiratory murmur became audible, the frequency of the pulse abated, the countenance resumed its former animation, the chest expanded, she increased in flesh, and the entire constitution was renovated. Before these desirable results were attained, she had two or three times, within six months, fresh liquefactions of pre-existing tubercles, attended, of course, with more or less renewal of the constitutional symptoms, during which the expectoration showed the softened

opaque tuberculous matter minutely subdivided and suspended in the muco-purulent sputa. With the exception of these changes, the cure went steadily on till recovery took place. The great augmentation of flesh and enlargement of the chest that followed were particularly noticed by her friends and relations, to whom she was in the habit of explaining the improvement that had taken place, by throwing her shoulders upwards and forwards, thus bringing the clavicles greatly in advance of the upper ribs, in imitation of the appearance of the chest in its previous state, that they might judge by contrast. This young lady used the tube for the space of about twelve months, three times a-day as directed, and her symptoms disappeared some months before she left it off: and the distinguished German pathologist Hohnbaum, who translated my work on consumption into German, sanctions the propriety of this—strongly recommending the extension of the term of its use for the sake of security.

About two years afterwards, at the close of the gay season in London, I was again called in to see the lady whose case has just been described. She complained of cough and pain in the lower scapular region, which I attributed to fresh softenings of old tuberculous nodules. Appropriate medicinal treatment, with the use of the tube, soon removed these symptoms of relapse, and she has not since required any medical advice. The mechanical respiration in this case prevented the deposit of fresh tubercles, and altered that peculiar habit which generates it.

Her eldest sister, with whom she had been in the habit of sleeping a few months previous to the attack, exhibited unequivocal signs of consumption; and, though she had the advantage of the most distinguished advice, she experienced no relief although removed to Hastings. The bracing sea air and horse exercise which she there enjoyed, brought about some amelioration, so far as to check the most distressing symptoms for a time, and partially to mitigate her cough, but she still remained in a very delicate state. The satisfactory result of the sister's treatment induced her mother to draw my attention to her case also. I found the chest very much con-

tracted, the middle of the collar-bones standing out nearly three-fourths of an inch in advance of the upper ribs, which were, of course, greatly depressed, particularly those on the right side. Auscultation discovered in the summit of the right lung clear indications that consumption existed in a latent form, attended with an insensible excavation. For the improvement of her general health tonics, chiefly quinine, with preparations of iron, were occasionally prescribed, and for the local affection the artificial respiration was steadily employed. The result was, that under this treatment she rapidly improved, the chest expanded, her complexion, from being very pale, became somewhat florid, and the functions of the system, which had been deranged by the constitutional debility, were restored to their normal state. She was subsequently married to a person of noble rank, by whom she has had children, and her general health has not since been interrupted by any consumptive manifestation.

On examining the chests of the remaining members of the family, my attention was directed to that of a younger sister, which was preternaturally full and large, forming a remarkable contrast to the two preceding cases. Her general appearance was that of robust health, the complexion florid, and her size and growth beyond her years. From the conformation of the chest I at once suspected that there was some physical impediment to the respiration, which, on inspecting the throat, proved to be the case; the tonsils being so large as almost to meet. This enlargement at times interfered with the voice. There was nothing remarkable in the respiration, except that it was puerile. I explained to the family, and to her father who was present, the connexion between the tonsils and the highly-developed chest; and added, that although I could not by the ear detect the signs of tuberculous disease, yet I had no doubt that the peculiar diathesis which had given rise to this unusual tonsillary enlargement, had also led to the deposition of tubercles, and that they existed in a scattered form in the lungs. With a view to lessen the susceptibility of mucous irritation in the throat, I suggested the propriety of diminishing the tonsils by a leech applied occasionally below each ear, to be succeeded at times by a small blister. Sup-

saparilla to improve the general habit, and iodide of potassium to promote absorption, were also recommended. This treatment was adopted, and the tonsils were reduced in size. The young lady was sent to a school at Brighton, where the tonsils became still more diminished from the effects of sea air, and her chest after some time began to flatten, and other signs of phthisical disease presented themselves. She had been cautioned to use the tube, to make up by art for the loss of the protection derived from the lessening of the tonsils, but she neglected it. She returned to London for advice, when I was again called in. I pointed out that the reduction of the tonsils was an evil, that the operation of some exciting cause had brought on the softening of the tubercles previously suspected, and that the flattening of the chest, with the other symptoms, might have been prevented, had my directions as to the use of the tube been observed. Finding her constitutional symptoms urgent, I advised the abstraction of blood from the upper part of the chest by leeches, attention to alleviating and preparatory medicinal remedies, and the regular employment of artificial respiration. These were attended to for some months at Brighton, to which place she after a short time returned, and finally got quite well, in the identical locality where the disease had first showed itself in a manifest form.

The eldest son of this family had recently returned from a continental tour, undertaken for the sake of improving his general health, which was delicate. On examination, no evidence of disease was detected by the ear, but the chest was very much contracted, and his general appearance by no means healthy. He had spent some time among the mountains of Switzerland, where the climbing of ascents was well calculated to excite his lungs to deep inspirations. But the flatness of the thorax, the tuberculous diathesis prevalent in the family, the absence of tonsillary enlargement, disease of the heart, or some other protective agency, led to the conclusion that his lungs were extremely liable to tuberculous invasion, if not already tuberculated. He had just obtained a commission in a light infantry regiment, and was about to join it—a course which could not fail to be approved of, as the exercise, which includes a great deal of running, would prove highly favourable to the

proper expansion of his lungs. The service agreed with him remarkably well; he liked it much, and was exceedingly active; the chest expanded, and his general health was considerably improved. Some months after he married; and about a year subsequently, the regiment to which he belonged was ordered to hold itself in readiness for foreign service, on the breaking out of the war in Syria. Being the presumptive heir to a peerage, and at the particular desire of the noble man whose daughter he had married, he retired from the army, very much against his own wish. The change from an active to a comparatively inactive life, was followed by an impaired state of his general health, and a cough. Four months from the commencement he came up to town, and had the advice of one of Her Majesty's physicians in ordinary, who considered his case decidedly consumptive, and exceedingly serious, and directed him to proceed immediately to Tonbridge Wells, giving him the name of a medical man under whose care he was to place himself. This was in the middle of summer, and in the latter part of autumn he was to leave for Nice; but being advised to the contrary by me, he remained at home. The right lung was diseased, and the difference between the semi-circumference of the right side of the chest and that of the other, amounted to nearly an inch and a-half. The usual symptoms—cough, nocturnal perspirations, &c., were present. Considering that it would be highly improper to send him away, in such critical circumstances, from the very place where it might be expected he could procure the best attention—that it would be, in fact, a virtual abandonment of the case, I dissuaded him from his proposed journey, and apartments were, in consequence, taken for him near the residence of his parents, a short distance from Hyde Park. Due attention having been now paid to the relief of the constitutional symptoms, he was placed under a course of mechanical respiration, and shortly began to show evident signs of amendment, which ended in recovery, and thus superseded all necessity for leaving town or going abroad. Several winters have now elapsed, and he still enjoys immunity from any return of the consumptive symptoms.

The above cases are not the less interesting from the cir-

cumstance of having occurred in one family, and three of its members having been cut off by consumption, as I have already observed, before my advice was taken; and it is not going beyond my own conviction to say, that, but for the use of the mechanical respiration, the others, in all probability, would have shared the same fate. The analogous features in their respective histories afford at once negative and positive evidence of the soundness of the principles acted upon in the preceding statements; some of which are worthy of remark. In the first case, the pulmonary affection showed itself primarily in the right lung; and here we see it retarded and driven back, as it were, by the accidental enlargement of the left tonsil; on the return of this gland to its normal size, we find the consumptive indications reappearing, the site of the disease having changed from the right to the left lung.

It may here be incidentally remarked once more, that the greatest amount of disease is almost generally recognisable, before and after death, in the left lung. When tubercular deposition first commences, it is generally in the summit of both lungs, but greater in the right than in the left, and therefore solution is first discovered in the former. After this, it may often happen that some circumstance, such as has been already mentioned, interrupts its progress by expanding the pulmonary tissue in the neighbourhood of the disease. The more this tissue is expanded, the less susceptibility does it retain of fresh tuberculariza tion; and hence the disease, if not checked in its advance, spreads more on the left side, and makes its most extensive ravages in that lung.

The effect of tonsillary enlargement was also seen in a very marked and unequivocal manner in the third case, in which the chest was prematurely full, and well developed during its presence, but sunk into an opposite state of contraction upon its removal. The whole family, indeed, evinced a predisposition to the disease. Tubercles had formed in all their lungs; but in the cases adduced, their liquefaction had been kept back, and controlled partially and temporarily by natural antagonistic causes, and ultimately in a permanent way by art, which stepped in with aid, more certain and decisive than nature. Some credit was, no doubt, due to the medicinal

treatment, both preparatory and accompanying, and this is a part of the question to be considered in its proper place; but the complete failure of more medicinal treatment in similar cases, or its very doubtful and unsatisfactory results, proves decidedly that the mechanical respirator had been the most efficient agent in the operation, and may with justice lay claim to the credit of success.

The fourth case exemplifies how unnecessary it is to remove patients from town, either to the country or abroad, when suffering from manifest consumption. When affected with this disease, the practice of sending them away from their friends and their country appears to me highly reprehensible: the chief argument in its favour would seem to be precedent. This unwise custom has so long prevailed that the propriety of it has ceased to be questioned. No good could have resulted from the patient's removal in this case. He would be separated from his friends and relatives at a time, and under circumstances, that most called for their attention and sympathy, also from the opportunities of procuring the best medical advice, which, it may be presumed, are much more numerous in this metropolis than abroad. The young gentleman alluded to recovered without removal, and was thus spared the inconvenience and fatigue to which a long journey would necessarily have exposed him. Liquefactions are of constant occurrence, and, while they are going on, patients require all the medical skill and care they can obtain, to watch and control the symptoms as they arise. Travelling by land or sea puts this indispensable professional assistance, in most instances, beyond their reach; and, when located at or near their destination, they run the serious risk of falling into the hands of unskilful practitioners, who, too frequently, by the administration of improper remedies—as, for instance, mercury—cut short the work of decay. These considerations are serious drawbacks to the hypothetical benefits of warm climates. Some of our high medical authorities, however, still sanction this practice, by recommending many of their patients to remove to distant climes. When some apparent benefit seems to be derived, and the patient has returned alive, I have, as has been

already noticed, been able to trace the cause to some natural protection, such as a contraction of the trachea, disease of the heart, &c., existing before he left home; or to pulmonary expansion, brought about by accidental catarrh caught in the prosecution of the journey; or, when the disease has been in its incipient stage, to the deeper and more energetic inspirations, which change of air and increased exercise occasion.

Here, while considering the treatment of this disease, it may be proper to explain in what manner the simple process of inhalation, while it expands the pulmonary organs, at the same time regulates the most important of the visceral functions. The expansion of the lungs tends indirectly to remove congestion of the liver, and also of the stomach, spleen, pancreas, and intestinal canal, all of which are in a great measure dependent on the free circulation of the blood in the lungs. The biliary, as well as the great salivary secretion is by this inhaling process promoted to a healthy state of activity. Any morbid irritability of the mucous membrane of the stomach, productive of indigestion, is also removed; the chyliferous absorption in the small intestines, so indispensable to life, is actively carried on; and the injurious retention of excrementitious matter, in the large intestines, is prevented by an increase of mucous moisture, and accelerated peristaltic motion.

It would be easy, did I deem it expedient, to point out at length the beneficial effects produced on other secretions, and show the manner in which inhalation acts upon that of the kidneys; but sufficient has been stated to enable the medical practitioner to draw his own deductions from the foregoing particulars.

With respect to the method of treating pulmonary consumption here laid down, I am well aware that it will have to combat in some quarters with deep-rooted prejudice, misrepresentation, and supercilious neglect: all which I anticipate, and am prepared to meet. I shall, however, console myself with the reflection, so appositely made by Sir David Brewster, that "he who contends for truths which he has himself been permitted to discover, may well sustain the

conflict in which presumption and error are destined to fall. The present age may not be a tribunal either sufficiently pure or enlightened to decide the issue; but he can appeal to posterity, and rest with confidence in its sure decree.

[Medical Times, March 4, 1848.]

The principal concomitant affections or complications of consumption, over which measured mechanical respiration exercises a beneficial control, next claim our consideration. One of the most frequent and troublesome of these is ulceration of the larynx. The viscosity of the morbid secretion to the brain determines the blood to that organ, and the obstacle to its return, presented by the peculiar exciting character of the cough, keeps the patient in a constant state of excitement and irritability, equally distressing to himself and his attendants. The sense of constriction in the throat, dryness of the fauces, dysphagia, ejection of the food through the nostrils, lancinating pains shooting in the direction of the ear, all conspire to torment the unhappy sufferer, and diminish the value of any addition to the term of his existence. It is astonishing how long this affection may protract life. I have known it to do so in some instances for several years: this is effected by the imperfect expectoration, consequent on constriction within the larynx, and adjoining portion of the trachea, which renders the lungs voluminous. Thus we may account for the small size of the cavities so commonly observed on dissection: traces of obliteration are also of frequent occurrence, indicating the reparative process carrying forward by the aid of the obstruction.

M. Cruveilhier, in his "*Anatomie Pathologique*," records a case in point. "A labourer, aged 40, entered the Maison Royale de Santé, with all the symptoms of laryngeal consumption. He had been seized with hoarseness about ten months previous to his entering. On examination, his lungs appeared healthy, with the exception of a dry and sonorous cavity in the summit of the right lung. The patient died, suffocated by the laryngeal affection. On opening the body,

the vast cavity in the summit of the right lung was perfectly cicatrized." The affection of the throat, in this case, obstructed the expirations; the lungs, rendered voluminous by the detention of the air, brought the sides of the cavity into apposition, and cicatrization ensued. This was, however, but the substitution of one evil for another, equally, or I may say, more dangerous, and certainly more distressing. Occasionally so little do the lungs exhibit of the characteristics of disease, so masked are all phthisical signs, that the affection of the throat is often regarded as primary, and hence we hear laryngeal phthisis sometimes mentioned as an idiopathic disease. In all cases supposed to be so, the lungs, on autopsy, will be found to reveal the unequivocal tokens of primary pulmonary tuberculization, or the practised auscultator will have discovered it previously. The use of the tube has been found eminently serviceable in averting this complication, or modifying its character; it will rarely happen that prevention is not secured by its timely employment. Its power will be in proportion to the length of time intervening between the commencement of its use, and the period when, without it, in the course of nature, the laryngeal affection would have supervened. If other circumstances should not contra-indicate its use, even after the supervention, it may be advantageously employed to relieve the difficulty of breathing present. All these desirable results are obtained without the drawback of any aggravation of the symptoms, danger, or pain.

Another very serious complication is diarrhœa. When it sets in, the patient's death-knell, in the great majority of cases, begins to toll: the chances remaining of a lengthened respite are very few indeed; but these chances are increased by the careful and judicious use of the respiratory tube. A patient, named Swedenburg, was admitted into the Infirmary for Diseases of the Chest with aggravated symptoms of consumption; and, among others, diarrhœa. His lungs were also extensively diseased, yet he lived more than two years; during which, under this treatment, all the constitutional symptoms were greatly moderated, and existing cavities healed up. He died at last of diarrhœa. It has been already stated that, in old catarrhal cases, tuberculous diarrhœa is seldom met with.

Inhalation in the later stages produces a similar effect to catarrh: little apprehension of diarrhœa need be entertained if its use has been previously persevered in for any reasonable period. Thus, it would appear, that it may be employed to execute palliative and prophylactic, as well as curative means. It may be thrown out as a sheet-anchor, even at the eleventh hour. A clergyman's daughter, who had been despaired of, in consumption accompanied with diarrhœa, by several medical men, was induced, as a *dernier ressort*, to employ the Inhaling apparatus for two or three months, during which period a decided alleviation of all her bad symptoms took place. Considering herself perfectly recovered, she unfortunately discontinued its use and died. It is not improbable that, had she gone on till the disease had been more completely subdued, she might have been still alive. Many similar cases might be cited.

Pleuritic adhesions, in by far the greater number of cases, are occasioned by irritation from tubercles in the subjacent tissue of the lungs. Whatever expands the air-cells seems to take away this disposition to form pleurisy. In cases of asthma, we find pleuritic adhesions of very rare occurrence, except at the summits of the lungs: when met with, they may be often considered antecedent in origin to the former disease. The lungs in this state afford the best specimens of exemption from pleuritic agglutinations, or thickenings. It is interesting to observe, in those cases where they do occur, how the air-cells of the portions covered by healthy pleura are greatly dilated, hypertrophied, and, as it were, ready to burst their bonds. The respiratory tube, by its expanding power, in a similar manner prevents these adhesions.

The value of the tube in catarrh, which it supersedes as a curative agent, must not be overlooked. By due exercise and expansion of the bronchial ramifications, it contributes to allay, or mitigate to, irritability of the lining membrane: and I have often heard patients state that after its use in the morning they had been better, and more freely able to bring up the accumulated sputa. When contraction of the trachea exists, the exertion of the lungs required for the expulsion of the air dilates by the pressure from below upwards the

great air-passage, and counteracts the tendency to spasmodic action and superficial ulceration or thickening. Hence it may be advantageously resorted to a few months before the setting in of winter, or before removing to cold humid climates, particularly by persons who are very susceptible of a return of the bad symptoms from exposure to the ordinary exciting causes. It contributes to prevent and remove congestion of the mucous membrane, by the healthy cuticular action consequent upon improved sanguification. As a prophylactic, it may also be ordered when the constitution is scrofulous; it alters the habit, and renders not only the lungs, but also all the other viscera less susceptible of tuberculous deposits. Hence we might deduce the propriety of its general adoption by the members of those families in which the hereditary taint is suspected, or has already begun to develop itself.

In cases of empyema, its employment is calculated to add to the chances of recovery by improving the condition of the lung on the side opposite to that affected, and producing slight expansion of the diseased lung even in the face of the accumulated fluid, if timely resorted to, before the conversion of the investing pleura into fibro-cartilaginous tissue. The disease is kept from advancing: the empyematous matter thus left to itself, may, under favourable circumstances, determine to the surface, in illustration of which the following case may be read with interest:—

About five years ago, Mr. S——, of the Entrée Office, at the Custom-house, Liverpool, came up to London for advice. He was found on examination to be labouring under consumption, with empyema of the left pleural sac, and his general health was less impaired than might have been expected from the nature of his complaint. The state of the chest, and all the symptoms, were further improved by the use, for several months, of the respiratory tube. A tumour at length formed, which soon began to fluctuate, and matter pointed externally. It was opened by a surgeon in Liverpool, and the contents of the pleural sac allowed to escape. After some short time he improved surprisingly, became robust, and considered himself perfectly restored, with the exception of a slight oozing discharge, which rarely amounted to a wine-

glassful in a day. During this progressive state, he was in the habit of practising the mechanical respiration, but on his health becoming very satisfactory it was laid aside. He then married, and mixed in general society, visited and frequented parties as a person in perfect health would do. A few months subsequent to his marriage, fresh hæmorrhages in his left lung brought about a return of alarming symptoms, which becoming gradually worse, he came to London again for advice. He acknowledged that he had neglected the instructions sent to him to Liverpool, the principal of which were, to persevere in the use of the tube, and avoid exposure to the night air. Had he carefully observed the advice thus given, he might have recovered instead of sinking as he did under the disease. His well-marked improvement in the beginning, when he strictly acted upon it, demonstrates this supposition. His death took place about eighteen months after the operation, and was attributable to exhaustion from both tuberculous liquefaction and its consequences. The discharge never entirely ceased, but did not increase during his last attack.

A young lady living at Gravesend, a friend of a very intelligent practitioner there, had been confined to her bed for some weeks, constantly lying on the left side. The case was obviously one of empyema supervening on consumption. The constitutional symptoms were not absent, but had been very strongly indicated, as appeared upon inquiry, before the occurrence of effusion. It is worthy of note here, that when empyema takes place in consumption, the constitutional symptoms become equivocal,—they are either very slightly marked, or nearly absent. Leeches were recommended to be applied to the side, followed by blisters, with a view to lessen the vascular action of the serous membrane and promote absorption. It is unnecessary to enter into the case more minutely than to state that the mechanical treatment was adopted to obliterate phthisical excavations, and produce a general pulmonary expansion. After the lapse of about two months the matter pointed; an opening was made by a surgeon, which was followed by a purulent discharge: this continued for some weeks. Meanwhile, she persevered, as

directed, in the practice of inhaling, her symptoms being at the same time watched by her usual medical attendant. A few months afterwards, being perfectly restored, she came to London in a very satisfactory state as to her general health, and continued free from any pectoral disease.

The respiratory tube was originally prohibited in affections of the heart generally, but further experience has proved that it may be resorted to in these cases also with advantage, when the lungs are not congested, but simply voluminous, in consequence of mucous bronchial intumescence or tracheal spasm. It has been found useful in heart affections symptomatic of chlorosis, and in most of the nervous complaints of females attended with cardiac dilatation. Its beneficial effects on the sanguification are exemplified by altering the complexion from a pale to a healthy sanguineous tint, and on venous congestion, by removing sublividity of the lips and turgescence of the veins of the neck.

By the judicious use of the Inhaling Apparatus, and the necessary attention to what may be called the subsidiary treatment, that which Nature accomplishes partially or imperfectly will be effected without entailing any injurious consequences. Chronic Bronchitis superinduces vesicular emphysema, thus rendering the lungs too voluminous; but Inhalation, while it gives full expansion to the aërial tissue, and develops the supplementary cells to their normal extent, leaves behind it no vesicular emphysema.

Moreover, Inhalation, by increasing the expiratory efforts, has a tendency to remove Asthma as well as Consumption, by restoring the healthful relation between the two functions of inspiration and expiration. In Asthma the ribs are raised too high; in Consumption they descend or sink too low. By the requisite adjustment of the inspiratory and expiratory movements, these abnormal effects are obviated, and the entire chest acquires its due form. In cases of Consumption, the expansion given to the lungs raises the depressed and flattened ribs, thereby restoring the chest to its proper shape. Hence the use of Inhalation is indicated in Asthma as in Consumption, and this principle is fully borne out by numerous and successful cases.

APPENDIX.

With a view of adding to the utility and interest of this work, I have subjoined a few notes which, with some slight modifications, originally appeared in the new translation of Laennec, published 1846, and were furnished by myself.

The Expiratory Murmur.—With regard to M. Piorry's claims to the merit of being the first who directed the attention of pathologists to the expiratory murmur, I may here state, that I was certainly aware both of the existence of the expiratory murmur in the normal state, and of its value and importance in a pathological sign, as frequent allusion to it will be found in my work on Asthma, published in 1838; and in the Third Edition of my Treatise on Consumption, which appeared in 1840.

Comparative Utility of Mediate and Immediate Auscultation.—It may be observed, that in the course of my own very extensive practice I have scarcely ever known the immediate application of my ear to fail, although I have been repeated witness of the failure of the stethoscope in the hands of others, who prided themselves on the dexterity with which they used it. I remember numerous instances of patients who were declared to be consumptive by many experts with the stethoscope, and whom I subsequently found to labour under no different affection of the chest, nay, even under emphysema. Such operations on the chest as were performed at the infirmary and elsewhere under my directions, have been undertaken on diagnoses made evident by that instrument, and their correctness has been verified by the result of the operation.

Andral remarks, "Immediate auscultation is far from deserving the animadversions cast upon it by Laennec. Thus the ear may be closely applied to almost every point of the thoracic parietes; and where this is impossible, which is a rare case, we must then have recourse to the stethoscope. So far, too, from finding the immediate application of the ear troublesome to the patient, I have known the contrary to be the case, and the manner in which the stethoscope is used by many physicians very much complained of. There are likewise

when the patient is confined to his bed, many positions which force even the most skilful to press strongly on the instrument, to keep it in its place. For instance, when the bed is close to the wall, and it is necessary to examine the region of the chest opposite the side on which the physician stands, it becomes difficult to fix the instrument; he is himself unsteady from having to bend so far forward, and sometimes he is obliged to give up the attempt as an impossibility. Now, in those cases, there is no difficulty in immediate auscultation."

"As to the objection raised to the use of the naked ear, on account of the uncleanliness or perspiration of the patient, these inconveniences are easily avoided by placing a handkerchief or napkin over the part. As one's ear is always more ready than a stethescope, the generality of medical men will be inclined to use the one more frequently than the other. I may lay it down from my own experience, backed by that of most other observers, that immediate auscultation furnishes as clear and precise data as mediate, and that the latter becomes necessary in a very limited number of instances only. For example, it becomes indispensable, when we wish to auscult the lungs, in some cases of vicious conformation of the thoracic parietes, which prevent the close application of the ear, to render pectoriloquy more evident. With this exception, immediate auscultation has every advantage over the other method, and deserves the preference, since it is highly important to simplify the means of auscultation as far as possible; and by proving to practitioners that its employment is independent of an instrument which they cannot always have about them, we make auscultation popular, and extend its practice."

I have observed that the application of the ear to the eminences which project close to the depressed part requiring examination, answers quite as well as the application of the instrument over the part itself. The very projection serves as a conductor of the sound.

Incipient Consumption.—There are few cases in which incipient consumption may not be detected, if the chest be carefully and judiciously examined. In the commencement, there will be found slight absence of the respiratory murmur over the superior parts of either side of the chest; existence of a mucous râle in one or more points; sound of respiration increased in the neighbourhood; and if the disease be slightly interrupted by natural causes, as by the intervention of bronchitis, or by change of residence producing increased expansion of the lungs, some modification of râle may occur, followed, after a longer or shorter time, by a prolonged expiratory murmur.

It has more than once occurred, that patients have applied to me

in whom I have denied the existence of incipient consumption although doubts on the subject had been entertained by their own medical advisers; and when these patients have subsequently complained to them of the discrepancy of opinion entertained, the reply was, that consumption had manifested itself since they were last examined.

Of the occasional Cause of Cancer in Phthisis.—It may be well to observe here, that cases of recent cancer do very frequently arise from tubercular deposits in the lungs. The most inquisitive into the history of the case will satisfy every reasonable person of the truth of these remarks; and a still stronger conviction will be produced by post-mortem examination. I have elsewhere adverted to the beneficial effects of caloric supervening in phthisical cases, and, in fact, steam-baths constitute one of the instruments very often available in the case of phthisis, by dilating and preventing the further contraction of the chest, which would give rise to fresh crops of tubercles. My work on Consumption abounds with instances in proof of the important agency of caloric in effecting this happy result.

Salutary Effects of Latent Cutaneous, or Irritable, or Fever, as relative to Consumption.—I must here avail myself of the opportunity of making a communication well deserving of serious attention. The latent materials, so frequent in the course of continued fevers, are not without their salutary effects. The debilitated state to which patients are reduced would constantly expose them to the invasion of consumption, were this liability not counteracted by the occurrence of eruptions, which serve a good purpose, by preventing contraction of the chest, and the consequent deposition of tubercles, until the patient's strength becomes perfectly established, and renders him proof against tubercular disease. The more healthy the individual, the greater is his liability, for want of these latent eruptions. The principle of antagonism has already been explained under the head of phthisis. This is, of course, another application of my principle of antagonism.

Local Character of Phthisis.—M. Mer. Laennec is in error with respect to what he says of the local character of consumption: the disease is probably localized when nature sets up some antagonistic affection, as chronic catarrh, pulmonary emphysema, or heart disease, hysteria, epilepsy, &c.: in fact, any condition, whether natural or induced, which involves a preternatural retention of the blood.

Remarks on Consumption.—I must express my dissent from what has been here stated by Laennec as a general principle, regarding the

effects of small local bleeding in cases of hemoptysis, *so far as it is connected with phthisis.* He says that he has witnessed the return of the menses, and aggravation of menorrhagia, during the application of leeches to the epigastrium; and that general bleedings, more especially when carried to a small extent, have sometimes a like effect on hemoptysis. Now this being a mere statement of irrelevant facts, and in truth nothing else, I might oppose to it other facts derived from my own experience. My method is, to apply a leech or two alternately to the hollow above the sternum, and a few inches below the clavicles, and with the almost immediate, and in a manner, talismanic effect, of soothing and allaying the hemoptoic irritation, and the other unpleasant symptoms connected therewith. How Laennec could have brought himself for a moment to suppose that the employment of local bleeding, no matter how applied, could have occasioned the very thing it was intended to counteract, is really beyond my comprehension.

Respecting the seat of Tubercles.—That pulmonary tubercles are seated in the air-cells themselves, and are the product of morbid matter—of a sort of concrete pus, secreted in the interior of these cells, has, I regret to find, led to the very distressing and exhausting practice of administering emetics in the treatment of consumption. If the internal membrane of the air-cell were the seat of the tubercles, is it not reasonable to suppose that we should see them also on other mucous surfaces, as on the mucous lining of the mouth and fauces, on that of the urethra, rectum, vagina, &c.? yet we never do; and it is a wise provision of Nature that they never do appear on these tissues, as their presence would endanger a closing up of some of the most important outlets of the body.

Comparative Frequency of Tubercles in the Right and Left Lung.—Laennec states, as the result of his experience, that tubercles have their primary seat in the right lung much more frequently than in the left: with this opinion I perfectly agree. Andral says, that tubercles are found in the greatest number in the left lung, and, consequently, *that they have more frequently their primary seat in that lung than in the right.* I hold, with Laennec, that the right lung is more liable to tuberculous deposits than the left; and I agree with the latter pathologist in thinking that it frequently happens that the first attack of tubercular phthisis is often recovered from, owing to some antagonistic disease being set up in the affected lung, whereby its expansion is increased, and the tuberculous cavity, if any existed, is closed up, or a new tuberculous deposit is arrested. Now, one effect of this increased expansion is, to render the lung once so

affected has little to fear from tubercular deposits. Hence, should any impairment of health subsequently take place in this individual, the left lung or its diseases would have little to do with the occasion of tubercular disease; and should nothing occur, as there did in the former attack in the right lung, to arrest the disease, it progresses unchecked and uninterrupted, to the formation of cavities, whilst the right lung, in consequence of its being, as it were, relatively sound, does not again suffer until the system has become so much deteriorated that the right lung also commonly succumbs. Hence it will appear evident why, in case of death, though the right lung was really the one first attacked, the greatest amount of disease is found in the left on *post-mortem* examination. In a somewhat similar way we may explain why, "when tubercles are only found in one lung," as Andral says, "they are more frequently found in the left than in the right." The fact is, that the tubercles first existed in the right lung: they were removed, or rendered quiescent, as we have already stated, through the medium of some antagonistic disease, or cause; they have latent there, however, vestiges of their former existence, viz., the black spots so constantly observable in the apex of a lung which has been the seat of tubercle. These black spots, however, are in general overlooked, it not being known that they always indicate the previous existence of tubercles: nevertheless, as also find in aged persons, who have been in early life consumptive, the remains of their lungs quite abound, and both lungs studded with these spots, which are the infallible criteria of the existence of former tubercles. I may add, that in aged persons who die of cardiac disease, if both lungs be closely examined, the apices will be often found marked with these black spots—a proof that these persons were gradually consumptive, and that they had recovered through the medium of some one of the antagonisms to which I have so frequently referred.

Fœtus in utero.—The infrequency of *fœtal* tubercle to consumptive phthisis is by no means so great as Lænnec and his commentators would seem to think. In fact, the result of my own experience on this point may be reduced to a regular aphorism, viz., that persons suffering under *fœtal* tubercle are apt at the time, or have been, laboring under pulmonary tubercles, the further progress of which has been arrested by the intervention of some antagonistic affection, such as chronic ulcers, emphysema, &c. When, in an individual so circumstanced, a hæmorrhage takes place in the system, the tubercles so liquefied were deposited in a latent state anterior to the occurrence of any stress of the pulmonary disease. In these cases

where no such arrest takes place in the pulmonary phthisis, the liquefaction of the pulmonary tubercles, and of the tubercles in the rectum, may go on simultaneously; and whether from the more engrossing nature of the former affection, or from the overweening delicacy of patients to allude to the rectal complaint, the latter is in general overlooked.

Two persons are operated on for fistula—one recovers and the other does not: how is this accounted for? The one recovers because he has had a liquefaction of the rectal tubercles subsequently to the depositions of the pulmonary tubercles having been arrested by some intervening antagonistic agency, and consequently can have no fresh crops of tubercles.

Comparative Liability of Males and Females to Consumption.—My experience leads me to believe, that though apparently women are more disposed to phthisis than men, still the real fact is, that out of a given number of phthisical patients taken promiscuously, the number of males will be found to exceed that of females: it may be observed, however, that males, from their being more in the open air, have more frequently mixed phthisis, while females have it oftener in the pure form. Females have a source of immunity from consumption which males do not possess, viz., the loss of blood to which they are so liable, as in cases of menorrhagia, abortion, &c., which causes dilatation of the heart, and thereby creates an antagonism to phthisis. I may further add, that bronchocele, which we occasionally see in females, acts as a powerful antagonist, by inducing an enlarged or emphysematous state of the lungs.

External Signs of Scrofula indicate a Security against Consumption.—Individuals bearing on their person the external signs of scrofula, as cicatrices in the glands of the neck, &c., are more secure against pulmonary phthisis than those not so circumstanced. And the reason is, because such persons have had, at some previous period, perhaps as far back as childhood, tubercles in their lungs, from the effects of which they escaped by the supervention of some antagonistic affection, such as tonsillary enlargement, &c. If we observe children labouring under consumption, we find on examining them, that they exhibit no enlargement of the tonsils.

A good Configuration of the Body is not a Preservative against Consumption.—It is supposed that a good configuration of body is a preservative against the incursion of phthisis. This is unfortunately a serious mistake: a person possessing naturally such a configuration is the very one most likely to contract the disease by contagion, or independently of contagion, if his general health be impaired by

...ary cases, to be carried off very rapidly when the disease does set in. The reason of this is simple enough and easily accounted for on the principles laid down by me in this and my other Publications; indeed, such persons have no subjection to overcome by gradual attrition.

Contagion of Consumption.—I was one of many that believed consumption was not contagious; a more extended experience has however, afforded me ample opportunities of correcting this idea. I ascertained that among members of the same consumptive family, some, though in close and constant attendance on their relatives when labouring under consumption, escaped, and continued perfectly free from the disease; while other members of the family, on being exposed to any intercourse with phthisical patients, invariably fell victims to the disease. This led me to reflect on what could constitute so striking a difference in members of the same family, and in which we might expect to find a similar bodily predisposition. After much consideration on the matter, I turned my attention to the great principle which I had now long discovered, viz., the principle of pathological compensation; and I soon found that those individuals who were good cases for contagion had either enlarged tonsils, chronic bronchitis, asthma, heart affection, or some of those other antagonisms which I consider as capable of proving prophylactic against the invasion of consumption to any end, and therefore against its contagion. Amongst those antagonisms may be mentioned spinal distortion. My experience warrants me in pronouncing a person as diseased as above, *a priori*, beyond that an attack of consumption either from contagion, or through any other channel.

The fear of the contagion of pulmonary consumption was, during the preceding century, carried very far indeed. Morgagni himself acknowledged that he ventured to make but very few post-mortem examinations of the bodies of phthisical persons, for fear of taking the disease. He retained this prejudice during his entire life, as we read in one of his letters the following phrase: *phthisicorum cadavera fugi solitum, fugio etiam nunc.*

Influence of Dust.—The principal effect produced by dust is viscous intumescence of the air-passages, and contraction of the trachea, as is evidenced by the hyperæmia above the sternum; both of which would, indubitably, act as antagonisms against the occurrence of consumption. According to Louis, dust can exercise, at most, but a very secondary influence in the production of the disease.

Exposure to Wet.—With respect to the influence of exposure to wet in inducing an effusion of the lungs, I may refer the reader to

my work on Asthma, where it is shown that persons exposed to the constant action of moisture, such as watermen, &c., enjoy a singular exemption—not from all pulmonary affections, for they are the almost constant subjects of catarrh—but from consumption.

Dr. Beddoes, who published a work on Pulmonary Consumption in the year 1799, has embodied in it a series of what may be termed medical statistics, replete with particulars of the highest interest. He collected himself, and sought through the observations of others, the ratio in which persons of different occupations and professions are subject to various disorders.

From these united researches, it appears that those classes which are most subject to catarrhs, and all the diseases arising from cold, are the most free from consumption. This fact is particularly exemplified in the case of the Scottish fish-wives, who in all kinds of weather, cold, wet, warm, or dry, are in the habit of carrying heavy loads of fish on their backs for long distances, and with excessive rapidity. At times, thus laden, a general race will take place in order first to gain the market for the highest price.

The value of exercise, on which I have so strongly insisted in my Treatise on Consumption cannot be more strikingly illustrated. These women are subject to excessive toil, exposure to every kind of weather, and, in short, liable to all those circumstances which are usually conceived most likely to generate consumption; yet from the concurrent testimony of many medical men resident on the coast, and well acquainted with this class of persons, the disease is almost unknown among them.

Animal Emanations.—Butchers, tanners, and such persons are said to be remarkably exempt from consumption. May they not be indebted for this exemption to their constant exposure to the open air? This is the correct view of the matter: and I entertain, with M. Louis, the same opinions with respect to vegetable emanations.

It is stated by Dr. Beddoes, that butchers, proverbially a strong and active race, afford an example of immunity from consumption, and the cause of this is by themselves attributed to the "smell of the meat." The same vulgar belief may be observed in the common idea that following the plough is beneficial in consumption, on account of the odour of the freshly-turned earth. A moment's reflection on the concurrence of these circumstances will, I think, convince the most sceptical, that the origin of the exemption from consumption is mainly attributable to exercise and exposure to the open air.

Deposition of Tubercles.—A very natural question here arises, viz.,

why are tubercles deposited in the superior lobe of the lungs rather than in the inferior? This question may be very readily solved, on the principles already laid down by me. Tubercles appear first in the apex of the lung, because that part being very much confined and limited, as to its extent of motion, is by its position far less capable of expansion than the lower lobe. The influence of limiting the extent of motion of the lung will appear evident from the fact that wherever any point of the lung, no matter to what part, becomes confined, as by pleuritic adhesion for instance, tubercles are frequently deposited beneath such circumscribed point. Of course, we know that the great majority of pleuritic adhesions are the consequence of tuberculous deposition. M. Louis, whom I have already mentioned as having translated my Work on Consumption, states a fact highly corroborative of my views on the matter: it is this—he observed that phthisis frequently manifested itself in those young soldiers, who, conformably with the ordinary regulations of their discipline, were obliged to carry accoutrements, &c., which pressed heavily on the upper parts of the chest. It is obvious that the lower lobes, by reason of the progressive increase in the arches of the ribs from above downwards, have much greater extent of motion, and consequently greater power of expansion than the upper. The great exercise also of the pulmonary tissue in the lower lobes, paves a sort of compensation security on this part: on the same principle as that which renders the muscles of voluntary motion, comparatively speaking, so very exempt from tubercular deposit. The same circumstance of greater extent of motion also explains why ulceration in the lower lobes do not heal so readily as in the upper, whether the cure be effected by nature or by art.

Teeth in Consumption.—It is a common remark, that pearly-white teeth are characteristic of predisposition to consumption. It may not be uninteresting to mention one fact which I have observed, namely, that consumptive subjects very frequently have the teeth presenting a black appearance: this blackness first shows itself on the lateral parts of the two middle incisors of the upper jaw; the teeth of the lower jaw are but rarely affected. As a general rule, persons presenting this appearance of the teeth will be found, if their early history be inquired into, to have evinced, at some previous period, all the constitutional symptoms of consumption, and it is well worth remarking, that a person who has run through such an ordeal will usually be found to be proof against the contagion of consumption.

Connection between Ulceration of the Larynx and Bowel-Complaint in Consumption.—It is a very extraordinary circumstance, but one con-

firmed by my every-day experience, that consumptive patients affected with ulceration of the larynx at an early stage of the disease, escape the bowel-complaint to which consumptive persons are so liable, and which proves so truly distressing. I may here observe, that those consumptive patients in whom any of the antagonistic affections, so often alluded to, manifest themselves, are almost sure to escape both laryngeal ulceration and diarrhœa. Moreover, the laryngeal affection, setting in early, is also found to have the effect of preventing the formation of large cavities in the chest; but should tubercles be deposited in the bowels previously to the formation of the laryngeal affection, then the latter disease will not necessarily prevent the supervention of diarrhœa. I may also add, that when laryngeal ulceration occurs early in a consumptive person, and often before the ordinary symptoms of consumption are fully developed, the laryngeal affection will mask the disease altogether, give it chronicity, and thus protract the patient's life for a long time.

Chlorosis in reference to Consumption.—Though Andral thinks otherwise, I am led to the conclusion, and it is the result of long experience, that a female primarily chlorotic rarely becomes the subject of pulmonary consumption. This is conformable to the general law according to which patients suffering from disease of the heart are exempted from tubercular consumption. Dilatation is the affection of the heart that accompanies chlorosis; that state produces bronchial mucous intumescence, which, acting as an antagonist, serves to exercise the pulmonary organs, and thereby to prevent contraction of the chest, and accordingly tubercular deposition. In confirmation of the truth of this, it may be remarked that the chest of the chlorotic female is in general considerably developed.

Blisters and Tartar Emetic Ointment.—I feel myself called upon candidly to enter my protest against the too common practice of resorting to the harassing and truly distressing application of large blisters and tartar emetic ointment, which are known to torment and disquiet the patient so much, while the employment of a few leeches, occasionally applied, will be found to effect every desirable object, at the same time this mode of treatment does not in the slightest degree interfere with the use of nutritious diet, and those other soothing and restorative appliances so necessary in such a trying emergency. It is really unaccountable why medical men do not employ leeches much more frequently than they do, as they are of singular efficacy in allaying the more distressing symptoms of hectic fever, &c.

Cicatrices of the Lungs.—I may here observe, that I have found in three-fourths of the adults I have examined after death, either cicatrices

of tuberculous cavities, black deposits, or calcareous concretions. But to recognise these vestiges of tuberculous deposition in the dead body, requires more than ordinary attention on the part of the examiner.

Is Consumption Curable?—It is supposed by a number of medical men—some of them of considerable standing, whose opportunities should have enabled them to know better, that after tubercles are once developed, the disease is absolutely incurable, and that the physician can do little more in consumption than palliate symptoms, and strive to prevent its development in persons predisposed to it. This I believe to be a somewhat general opinion among many who set up to superior knowledge on this important subject. Now, to prevent tuberculo-puzzling, and avoid the evils always resulting from ambiguity of terms, I shall state the meaning I attach to the question. When I am asked, "Is consumption curable?" I understand that to imply—Is there any remedy in cases of what the progress of consumption can be arrested? My decided answer is, Yes; and in numerous I shall prove by reference to pathological science, the commemorative history of cases, and the decisive opinions of Laennec and several distinguished Pathologists now living.

Laennec, in several parts of his work, states that he has heard of persons who had been affected with chronic bronchitis, and died of various other diseases, unattended with tubercles found by a semi-cartilaginous membrane, precisely similar to that which lines the cells of the lung, to which these cavities bore an exact resemblance, with the exception that they did not contain tuberculous matter. The remaining portion of this extract is so strikingly accordant with my own views on the mode which Nature herself sometimes employs to cure consumption, that I shall not hesitate to quote it. "Such of these patients as had been carefully interrogated, referred the origin of their chronic catarrh to a severe disease under which they had laboured at some former period, and which had presented the symptoms of pulmonary consumption, often, indeed, to such an extent, as to cause them to be considered at the time as incurably consumptive." Surely no stronger testimony can be adduced than this of the possibility of a person recovering from palpable and undeniable consumption. Laennec has cited several cases, some of which fell under his own observation, and some under that of his friend M. Lavit, in which, on post-mortem examination, tubercles of the lung were found cured or transformed into fibrous, by the development of a semi-cartilaginous membrane. Let us here remark, on this membrane, that its presence is not at all necessary for the healing of a tuberculous cavity; for I may state it as the result of my experience, that such a membrane is formed in

those cases only where the walls of the cavity are a long time in approximating.

In a word, the reason why the curability of this disease is not universally admitted, is that medical men in general are not sufficiently minute in examining the state of the lungs after death in persons who die of other diseases besides consumption; and even when they do make such examinations, they conduct the autopsy in too cursory a way to derive any information regarding the actual state of the lungs. Having thus established the fact of the curability of consumption by the most satisfactory amount of evidence, viz., that of pathological anatomy, I shall now give as succinct a view as possible of the plan of treatment devised originally by myself, and followed up with such marked success. I have elsewhere,* on another occasion, entered at some length into a detail of the circumstances which first suggested to me my mode of treatment, and whence I derived the idea of employing inhalation in the treatment of consumption.

I shall now proceed regularly through the treatment of the different stages of consumption, and give an account of the precise method adopted by me under each; the method, in fact, which I have followed for many years, both in my public and private practice. Let me suppose a person to present himself with the symptoms of incipient consumption, viz., a dulness of sound in the summit of one or both lungs, with depression beneath one or both clavicles, a dry, short cough with or without hemoptysis; the general health at the same time suffering more or less, with incipient constitutional irritation. Now in this stage, my mode of treatment is as follows: in the first place, I advise the employment of the inhaling-tube (provided hemoptysis be not present at the time) for the purpose of exercising and expanding the pulmonary tissue, and thereby preventing a further deposition of tubercular matter; secondly, in order to allay any disturbance which may arise from the presence of tubercles, I prescribe the occasional application of one or two leeches, midway between the centre of the clavicle and the nipple. The action of a small blister, also, I find useful in order to promote absorption, alleviate cough, &c. I further recommend means for improving the general health, such as stomachics; and when necessary, the mildest sedatives. And here I must enter my decided protest against the administration of mercury in this stage, to quicken, as it is said, the absorption of the tuberculous deposit. Now, I have invariably found that there is nothing more likely to accelerate the liquefaction of tubercles than mercurial medicines; it is

* Consumption Curable, by F. H. Ramadge, M.D. Third Edition.

well known that Laennec's opinion was that consumption was incurable in the first stage: but pathological anatomy, however, has clearly shown that tubercles may remain for an indefinite length of time without softening; that they may assume a pasty or even a hard consistence, with a deposition of black matter around them, and also that they may be wholly or in part absorbed.

I now proceed to what may be called the second stage of the disease, in which the patient expectorates purulent matter, has nightly perspirations, and manifests all the other signs attendant on diffused or confirmed consumption, such as a sense of debility and lassitude, progressive emaciation, and, in fact, all the symptoms of an established hectic. In this stage, the patient often exhibits the distinct mucous respiration, and gargle when coughing; on the presence of which, as an index of a cavity, I place far more dependence as a diagnostic sign than on percussion. Here my practice is, as before stated, to apply one or two leeches beneath the clavicle; and should there exist any symptoms of tracheal irritation or disease, a leech is to be applied above the top of the sternum. The object of this practice is to allay the general and local irritation. The other treatment, both constitutional and topical, is to be precisely the same as in the last stage, with this exception, that somewhat more powerful sedatives are to be used. I would, however, apprise the reader, that tranquillizers employed by narcotic acidity below the ordinary dose. Now it is that the attentive and watchful eye of the experienced practitioner is more particularly called into requisition; for after the soothing treatment already advised has removed the symptoms of general and local irritation, the perspiration, &c.; should these, after being absent for a time, reappear, he must carefully resume the same means, such as the application of leeches, &c., which he adopted with so much success on the former occasion, such means having almost invariably occasioned by a new deposition. Among the other advantages resulting from the mode of treatment here recommended, I may mention that the application of the leeches will have the effect of preventing the ripening of those crude tubercles which may be seated in the vicinity of those already softened: the use of the Inhaler, by supporting and expanding the pulmonary tissue, will serve to approximate the walls of any existing cavity, and also prevent the deposition of fresh crude tubercles. Another advantage accruing from the employment of inhaling will be, that through it both ulceration of the larynx and the bowel complaint, those distressing secondary concomitants of consumptive disease, will be avoided.

We will now come to the last period of the disease, wherein a large cavity may exist in the lower lobes of either lung, with copious irri-

tation or disturbance of the bowels. A patient in such a state is ordinarily set down as almost beyond the reach of even a palliation of his symptoms. It is extraordinary what benefit may be derived in this distressing stage from the employment of the simple means already mentioned. My pupils have seen cases at the Infirmary where life has been protracted for years, notwithstanding the existence of large excavations in the lower lobes of the lungs; such protraction being evidently effected by the employment of the mechanical means already adverted to, which prevented the deposition of fresh crops of tubercles. The vast extent of the cavities, and the debilitated state of the constitution, at the time these persons applied for relief, rendered recovery hopeless. In such cases, however, exceptions did occasionally occur, of individuals with large cavities having been restored to health at the Infirmary for Asthma, Consumption, and other Diseases of the Chest, though they had been dismissed as incurable from other Institutions.

I cannot avoid animadverting on the absurdity, to call it by no other name, of those practitioners who publish the surprising cures of consumption they have effected by means of iodine, naphtha, cod-liver oil, &c. Surely, a moment's reflection on the pathological state of the lung in the confirmed stage of this disease, must satisfy every one that such substances, or indeed, any articles of the materia medica with which we are acquainted, cannot have any influence whatever in bringing about the result, which alone can constitute a cure of consumption, viz., an approximation of the walls of cavities existing in the lungs, and prevention of the further deposition of tubercles. To produce such effects, means capable of exciting something like a mechanical influence are obviously required. Remedies, the powers of which are *exclusively confined to acting on the vital force*, or on the constitution generally, have been tried for ages in the treatment of this disease—but TRIED IN VAIN. They have been found altogether wanting. I do not mean to deny that the employment of medicines internally, and sometimes externally, will be found useful and absolutely necessary; but the practitioner who expects a cure of consumption by them will find himself disappointed.

In this method of treatment I never neglect the use of internal medicines; for, I find them invariably valuable auxiliaries on several occasions. The application of the mechanical influence, however, is the *sine quâ non* for the closing of a tuberculous cavity, or the prevention of further morbid deposits. This mechanical influence is derived from the well-directed and judicious employment of—INHALATION.

The artificial mode of effecting pulmonary expansion has obviously

manifest and manifold advantages over caverns, and these pathological agencies already mentioned. Among others, the recovery effected by artificial means is realized by chronic coughs or dyspnœa, which, for the most part, attends those cases of consumptive disease produced through the habitual influence of other forms of thoracic affections. And with respect to the effects of inhaling, there is nothing counterpart or secret in them: these effects, both immediate and ultimate, are palpable and striking. Let a patient labouring under incipient consumption, whose chest bears all the aspect of phthisical construction, practise inhaling with the apparatus two or three hours daily for half-an-hour each time, continuing with five or ten minutes less will, in the space of a few weeks, find a wonderful change produced in his chest; externally the diameter concerned in respiration becomes developed, and the lung occupies all the cavity, both anteriorly and laterally, will be evidently extended. It is really surprising to see the great expansion which will be effected in the chest after practising inhalation for one or two months. I have known cases where, after using the tube a month or so, it has become necessary to have the waistcoat let out. Within the first month after inhaling, the circumference of the chest has been known to increase one or two inches.

It has been alleged by Dr. Peixotto, of Berlin, that the healing and permanent nature of this treatment of consumption has the advantage of including some of those pulmonic diseases, such as catarrh, asthma, &c., which I have already noticed as occasionally acting with so much advantage in retarding and arresting the ravages of phthisical disease.

This statement of the Berlin physician is most erroneous: for my real end and aim is not only to dispense with, but actually to remove, every vestige of asthmatic or catarrhal affection, and to obtain by means of inhalation full ventilation of the pulmonary tissue in the presence of catarrh, or asthma, may be supposed capable of producing.

Black Secretion in the Lungs.—The existence of black secretion in lungs which had been formerly tuberculized, was noticed many years ago in my work on Consumption—the Third Edition, which appeared in 1836. This black matter is, in fact, deposited in the places where tubercular had formerly existed, and been eliminated. In cases of chronic consumption, nothing is more usual than to see portions of this black matter surrounding isolated tubercles: black scales, consisting of the same matter, are often found in lungs which had once been the seat of tubercles, removed by absorption and elimination. I also mention the same black secretion in my work on Asthma, published in 1841.

Real Value of Change of Climate in cases of Consumption.—With respect to the influence of climate in phthisis, I venture to say that I do not consider it by any means entitled to that praise which has been given to it. Nothing can be more absurd than to suppose for a moment that a person labouring under consumption, and in that state removed to a warm climate, will be cured thereby. The only consumptive patient who can expect to derive benefit from a removal to such a climate, is one who has had consumption that has been arrested by the supervention of catarrh or bronchitis; in such a case, after the perfect arrest of the phthisical disease by the catarrh, should the patient migrate to a southern clime, he may get rid of his catarrh. Now, if this person had gone to a warm climate before his phthisis had been arrested by the antagonistic disease, what would have been the consequence? Neither more nor less than this: his removal to a new climate would have prevented the supervention of catarrh: and, thus, leaving him without any antagonism, his chest would have gone on contracting, his phthisical disease would have progressed, and he must have fallen a victim to his distemper, the inveteracy of his disease not being in the slightest degree influenced by the supposed salutary qualities of his adopted climate. Of such persons we may truly say, with a slight variation of one word,

Cœlum non *animam* mutant, qui trans mare currunt.

I have repeatedly dissuaded patients from abandoning their home, with all its comforts and all its advantages, and prevailed on them, with the most decided and marked benefit, to forego their visit to a warm climate when they were labouring under consumption. I have clearly pointed out to them the difference which it makes to a patient whether consumption begins in the summer or the winter season. If during the former, he has no chance whatever of having his disease arrested by the supervention of a bronchial affection. Now, applying the same principle to the individual who removes to a warm region while his consumption is still going on uninterruptedly, what are we to expect? The answer is given in what has been just stated. What would have been the fate of those numerous individuals whom we every day see labouring under chronic catarrh, or bronchitis, and who, if the history of their cases were carefully inquired into, would be found, for the most part, to have been primarily consumptive; what, I say, would have been their fate, if their consumption had displayed itself in the summer season? They would, for want of an antagonism, have been carried off in a few months by phthisis then left to itself.

On Tight-Lacing—its Effects.—On the subject of dress, and particu-

body the use of stays, is the only opinion that light-hung must prove injurious. I have now, however, somewhat modified that opinion, and do not look on the use of stays as productive of so much mischief as is generally attributed to them: on this point there is a perfect coincidence between myself and M. Louis. They certainly must have the effect of enlarging the upper lobes of the lungs where tubercles commence, to the prejudice of their growing so much on the lower; and, further, that of occasioning hypertrophy of the heart and consequent dyspnœa. This is the physiological view which I have taken on this subject for some time.

Perspirations in Consumption.—When we have no auscultatory proof of the existence of phthisical disease, the presence of perspirations may be depended on as one of the most conclusive signs we can have, when they are accompanied by cough, as this symptom will be sure to take place when even a small number of tubercles undergo liquefaction; and when the perspirations have ceased for some time, should they again return, we may act believe that a new tuberculous formation has commenced. The instances of consumptive patients who never perspire are extremely rare: such occurrences, however, do occasionally take place; but in them I have invariably found some affection of the heart to have supervened on the phthisical disease, which had in some degree removed it. Even when, however, under hopeless treatment, as by mercury in the earlier stages, perspiration is induced, the perspirations will, at times, not make their appearance. There are certain diseases in which nocturnal and nutritional perspirations do occur, and in which the existence of consumption is merely suspected; but these diseases generally perhaps more or less of a phthisical character. Almost all the persons who suffer under old cancer, may remember that some years previously they experienced all the common symptoms of phthisis, and, among others, perspirations; but in consequence of the disease showing itself in winter, they was saved by the supervention of hæmoptysis, or some other antagonistic disease: still it is remarkable how very few medical men take the trouble of inquiring into the previous history of these cases of chronic cancer which are of such frequent occurrence; if they did, we should probably cease to hear so much of the hereditability of consumption. Though the upper part of the body, and especially the chest, is the region whence the perspirations generally break out, yet, on some occasions, the lower extremities are observed to be most wet. On one or two occasions I have observed them to be confined to the soles of the feet.

Croup in Infancy a partial preventive of Consumption in after-life.—With respect to croup, I may observe that little or no attention has

been given to the morbid changes of the thymus gland as to its influence in either aggravating or protracting the disease. Dr. Cheyne, in his work on croup, has merely adverted to one instance of an enlargement of this gland, which he met with in a child two years old, but takes no notice of its effect in rendering the disease more severe; in fact, this is a point of pathological anatomy which has been entirely overlooked. When we consider, however, the effects which the pressure, occasioned by an enlarged thymus gland on the trachea, must produce, we need not feel surprised at its influence in occasioning all the symptoms of asthma, and its future influence thereby in protecting the individual from pulmonary phthisis—how it can act in this way has been considered in the preceding pages. I have seen several instances of enlargement of the thymus gland, and one or two instances of the same gland tuberculated; and I have also found this gland to contain an encysted tuberculated deposit larger than a filbert.

Percussion of the Clavicle.—A modern writer observes on this subject as follows:—"In no case is the importance of percussion so frequently and strikingly evinced as in the earlier stages of phthisis. A single blow on the clavicle will often afford the means of a more certain diagnosis and prognosis, than weeks or even months of observation of the general symptoms. How often have I heard in this ominous sound the death-knell of my patients!"

To these observations the following may probably be deemed a sufficient reply.—Signs derived from percussing the clavicle are of very questionable value, for, considering the situation of the clavicle, and the very small portion of the lung which lies beneath it, it must be evident that any sound obtained from its percussion can give us little or no information as to the state of the summit of the lung; the sound from percussing the clavicle must be abnormally clear. Another reason for not always attaching importance to this mode of examination is, that a person who has a deposit or a liquefaction of tubercles in the apex of the lung, may recover from them by means of some antagonistic disease, such as bronchitis, emphysema, &c., or by some mechanical agency, similar to that which I have so successfully introduced into medical practice.

The state of the Infirmary for Diseases of the Chest as it existed when I was connected with it.—If any corroborative evidence were wanting to substantiate the efficacy of my mode of treating consumption, it would be found in the fact of its having successfully triumphed over the disadvantages of the building *purposely* selected by the late Dr. T. Davies and his friends as the Infirmary for Diseases of the Chest.

This building was situated in Artillery Street, Bishopsgate Street, in the midst of a very dense and confined neighbourhood. There was

neither sewerage nor yard attached to it. What light the stairs received was from an air, or rather shaft from the lowermost floor to the roof, covered by a fixed skylight; its compartments of which the external air was entirely excluded. There was in the base of the shaft a large cesspool which occupied nearly one-fourth of the area of the building, and two privies for the use of the patients. Hence the whole place was constantly infested with the most noxious exudate and poisonous effluvia. It had no means of ventilation, except by the doors, which did not exceed two feet and a half in width. The largest ward was only 24 feet in length, by 13 in breadth, and 9 in height, and was made to contain seven patients. Such was the locality, and such the condition and structure of the building which was to supersede, and become a substitute, for the care of consumptives, instead of the long-supposed salubrious island of Madeira.

It would be out of place here to animadvert on the total want of judgment, or on the motives which could prompt men to select such a site for an Institution, under such circumstances as those just described, the object of which ought to be to afford the means of cure or relief for one of the most afflicting and important diseases incident to mankind, further than to observe that they evinced a total absence of all sympathy and feelings of humanity. Nor I may add, that if humanity itself had been set to work to procure any one person more unsuitable than another to expedite the work of decay, it could scarcely select any made more obnoxious for that purpose, than to convey patients, affected with consumptive disease, to such a place.

During my association with the Infirmary at Senior Hyperion, I unceasingly endeavoured to have these defects removed, and the inhumanness here pointed out, as far as possible, rectified. I repeatedly urged the individuals who had taken upon themselves the management of the Charity, to provide suitable and proper accommodation for the patients: but my remonstrances were either met with vague excuses, or compliance with my requests perpetually, under some unheeded and unfortunate pretence or other, postponed. In order to consummate this course of systematic atrocity towards the sufferers, and imposition on the credulity of the public, a statement falsely designated "The Twenty-ninth Annual Report" was issued, giving a glowing but deliberately untrue account of the state of the Institution. I solemnly say "*falsely designated*," as for several years no Committee Meetings had been held, nor any *credible* information given to the public respecting its management or condition.

Dr. Buxton, the founder of the original Institution, near the same locality, in order to produce a warm and uniform temperature, as a

curative agent, in the more advanced stages of pulmonary diseases, in "imitation of the mild and genial climates of Italy and Madeira," had recourse to the introduction of German stoves of thin sheet-iron, which invariably acquired a red heat. But the heated and parched air produced thereby interfered with, and was prejudicial to, the health of the patients, and retarded their recovery.

Consumption complicated with Empyema.—We cannot allow this opportunity to pass without expressing our unqualified admiration of the candour of Laennec with respect to the success of his operations of empyema. With all his high character, however, for pathological knowledge, he appears, from the numerous and blazoned accounts ushered into the world by the late Dr. T. Davies, formerly Junior Physician to the Infirmary for Asthma and Consumption, to be completely thrown into the shade, in consequence of the many instances of success which the latter individual has had, according to *his own account*, in the operation for this very serious affection. Dr. Davies stated that in his practice several cases of empyema were successfully operated on under his directions, and that the proportion of cures to deaths was as four to one; a proportion neither before nor since boasted of by any practitioner. In the majority of cases, empyema is a consequent upon phthisis. Now, if the latter be incurable, as several, and among others Dr. Davies, would have it, even when it is uncomplicated, how are we warranted in supposing that it can be cured in this highly-complicated form? or are we for a moment to suppose that all those cases of empyema were unconnected with phthisis? This is a specimen of boasting which we should consider it an injustice to medical science to pass over unnoticed and unreproved; it is decidedly calculated to do mischief by leading into serious and fatal errors.

Unfortunately for the accuracy of the Doctor's memory, out of five cases that were operated on by two of his friends, each of whom is stated to have been only once unsuccessful, one was a boy of the name of Cailly, residing near Finsbury-market, who was pronounced by Dr. Davies to have empyema, and to stand in need of the operation. Without allowing absorption to have any share in effecting a cure, an operation was determined on, and arrangements were made for it. The vessel for receiving the *expected matter* was placed *in situ*, and the operator appointed for the occasion attempted to introduce the trochar. On his meeting some obstacle to the entrance of the instrument, the surgeon became nervous, and notwithstanding the Doctor's encouragement, refused to proceed. This boy recovered: so much for one of the five cases. The same individual who operated on the boy Cailly, went immediately afterwards and operated in the same neighbourhood on

another patient, and the case terminated fatally. Another case was then had, and to be operated on by the same surgeon; but there is reason for thinking that this was not a case of empyema, but one of phthisis, stopped by the supervention of catarrh and emphysema. In this case it may be as well to mention that a mark was observed on the body of the patient, as if the trochar had been introduced, but there were ample grounds for concluding that no fluid had been discharged from the chest. With respect to the remaining two, one of them was a little boy, who was operated on by another practitioner, and died exhausted by an irremediable discharge: the remaining and last one of the five, was never operated on at all, but certainly was made the subject of the present prevarication; as one of the parties connected with the pretended operation actually referred to a small pimilar depression, as the mark of the wound made by the trocher: when contrasted by another similar mark, situated some few inches laterally, being pointed out to him, he stated that he had performed the operation a second time! such was the result of his confession as being detected in his claim to operative success.

After the publication of the above cases, another case occurred, and the only one received as an in-patient to the Infirmary, in which the said operator performed *paracentesis*. It was in the instance of a young man. And though the symptoms were not so very urgent as to require an immediate operation, yet it was resolved on, and performed; but, unhappily for Dr. Davies and his associate, the issue was fatal. Another patient, a boy of the Jewish persuasion, supposed to labour under empyema, was under the care of the same operator for five weeks, during which time mercurials were given with the view of promoting the absorption of the supposed fluid. At length, after the failure of the medical treatment, an operation was determined on; but the boy's relations having consulted a physician, the operation was stopped, and the patient, who had at the time a cavity in the lower lobe of the left lung, but nothing whatever of empyema, subsequently recovered and is now alive. A large premium was offered to the Institution on condition that satisfactory proofs were obtained of the performance of the above-mentioned *successful* operations in the hands of the two practitioners alluded to, but though such proofs were confidently promised, they were never "a forthcoming," and the Institution was without the prize. More recently, however, we have had a claimant for nearly equal success in the operation of *paracentesis thoracis* in the person of a London physician; but unfortunately the authenticity of his cases depends so very much on his own *ipse dixit*, that we beg leave to decline saying more on the subject. Ed.—*New Translation of Laennec.*

ADDITIONAL AND APPARENTLY HOPELESS CASES, WITH ILLUSTRATIVE LETTERS, ETC.

Consumption complicated with Pneumo-thorax and liquid effusion; successfully treated by Paracentesis thoracis *and Inhalation.*—The following history of this case has been condensed from a document drawn up by the patient himself.

Mr. B——, aged 45, and at the head of one of the departments of Her Majesty's Mint, had, when a young man, in 1824, a troublesome cough attended occasionally with sore throat and nightly perspirations. In the commencement of 1837, he suffered severely from the influenza then very prevalent. He had since been troubled with shortness of breath, which symptom, however, had existed previously, but did not become permanent till after the influenza. In the year 1844, seven years afterwards, he found his health declining considerably, which he attributed to close confinement, and constant exposure to the noxious vapours arising from the Melting-House. In the commencement of the following year, during the winter season, he began to complain of a distressing cough, which neither an intermission of business, nor change of air, for some weeks, alleviated.

In the month of August, 1845, he was attacked by a more aggravated cough, which was increased both in frequency and intensity. Simple treatment having failed, he now placed himself under the care of a homœopathic practitioner, but, according to his own account, without any perceptible benefit.

In the beginning of 1846 his health became still further seriously affected—his strength very much impaired—and, to use his own words, "he was torn to pieces by the violence of the cough," without the least prospect of recovery: all this time he continued under homœopathic treatment, but the common symptoms of consumption began to develop themselves; perspirations appeared, though not profuse; the expectoration assumed a puriform character—signs of febrile action ensued, while the cough was very troublesome. These several symptoms thus continued to increase till the month of April, when his stomach also became

disordered. In the early part of the summer it was recommended that he should go to Jersey for change of air; having done so, some temporary improvement took place in his health, but scarcely any lessening change of the local symptoms.

About the beginning of July he had an increase of all the symptoms of phthisis; he complained of a tenderness of the chest, not liable to compression. After which, he, for the first time, became sensible of a "rattling" in the right side of the chest when breathing, with an expectoration of greenish matter. After some transient amelioration, which lasted until the beginning of September, all his symptoms assumed a more serious aspect. Besides the cough, which was almost incessant, he had high fever and delirium, with copious perspirations, which were followed by acute pain in the side; and in the course of a few hours by a feeling, as he himself expressed it, "as if the whole interior of the right side of his chest had been filled with a mass of lead." A lateral projection was also observed; his breathing had become very difficult, and the veins retained almost no pulsation.

Up to the beginning of November, when he returned to London, the right side, though free from actual pain, was oppressed with a sense of fullness; he felt a hard projecting substance reaching downwards, almost as far as the navel, occasioning a distressing feeling of weight and dragging. The mere attempt to move about produced so violent and terrible a fit of coughing as to threaten suffocation.

A little after this he perceived in the pectoral side, one morning, a sound similar to that of water when shaken in a bottle. He moreover complained of a total want of sleep, and of being unable to find ease in any position whatever, when in bed.

In the beginning of January, 1817, I saw him for the first time; his condition was then as follows:—The right side was strikingly enlarged—the intercostal spaces slightly projected—the whole side appeared as if levered, and the mammary and epigastric veins on the right side were much enlarged. The whole of this part of the chest was immoveable—the sound on percussion was very dull, the dullness extending nearly to the sound rib—there was total absence of the respiratory murmur—the heart was pushed considerably to the left side. In the apex of the opposite lung there was a crumpling or creaking sound, indicative of old pulmonal disease. On this occasion his principal complaints were violent and distressing cough, hoarseness of the voice, and a slight fluctuation, accompanied with metallic tinkling, which was perceptible when the patient was directed to incline forwards and then suddenly backwards.

Being immediately satisfied of the nature of the complaint, namely, that it was a case of liquid effusion supervening on consumption, and

assured that there was no other means of relief but by performing *paracentesis*, I at once proposed to him the expediency of having recourse to that operation, to which he readily assented; and I proposed Mr. Wakley, jun., as the operator, having previously had ample opportunities of judging of his surgical skill.

Towards the end of January, we determined to remove the fluid; which we did, to the amount of three quarts. A larger quantity might have been taken away, but I did not, on this occasion, deem that expedient. The fluid drawn off was transparent and amber-coloured. The relief experienced by the patient was immediate, nor did any unfavourable symptoms follow the operation.

On the 12th of the following month, at which period the quantity of fluid was somewhat increased, with a feeling of oppression and weight in the chest, I considered it necessary to repeat the operation, and Mr. Wakley accordingly removed a quantity of fluid, equal to that obtained in the first instance. After this operation the abnormal enlargement of the chest, as well as the other symptoms connected with it, became obviously diminished.

From this period his health gradually, though slowly, improved, and the cough, which had been previously so distressing, was now much relieved; and all the functions were more normally performed.

On the 15th of March, in order to remove as much as possible of the residual fluid, I again requested Mr. Wakley's assistance. The quantity drawn off on this occasion amounted to four pints and a half, and exhibited a somewhat purulent deposit.

It was after this operation that a decided improvement took place in the general health and local symptoms of the patient. Three months after, it became necessary, in consequence of a return of weight and dragging in the chest, to have recourse to an operation for the fourth, and last time. I endeavoured at this time to have the chest completely emptied. The entire amount of fluid removed by the several operations amounted to two gallons and three pints.

The fluid abstracted in this last operation exhibited a quantity of deposit greater than any of the preceding ones. Twelve months after the last operation the patient was in the enjoyment of good health, and able to perform all his official duties in the most efficient manner.

With regard to the healing of the perforation of the lung, which must have been effected in the above case, it must be obvious that such a favourable occurrence is exceedingly rare. The possibility, however, of such an issue appears to me to be satisfactorily proved by the highly vascular appearance occasionally presented by the surface of the lung in the vicinity of the perforation; and what is still more

extraordinary, such vascularity presently appearing in those parts, though they have been for a length of time lethal in every kind.

It may be added, that a certain facility for such a healing may have been afforded by the nature and form of the perforation, which was probably cartilaginous by a firm deposit of lymph. And it may be further stated, that, if this certain acquired valvular characteristic, a still greater facility would be afforded for sealing up the aperture of such perforation by a mode which rendered mechanical pressure by Nature indispensable. Ocular inspection, as well as auscultation of the chest, twelve months after the last operation, indicated no perceptible difference in either side.

In the following Case there will be found many points of analogy with the one now detailed, the statement of which was also drawn up by the patient himself:—

Mr. Cannan, aged 30, up to March, 1846, never had any illness, though often exposed to wet and cold, was married in 1838, and lost his wife, who died of pulmonary consumption, in 1845. During her illness he attended her very assiduously, and as he himself says, "incautiously." Towards the close of the same year he came to London, and in 1846 became affected with a cough, of which he took no particular notice. This cough continued, and one night in the beginning of the month of March he awoke with an agonizing pain in the right side below the ribs, which caught his breath very severely. In this part there was a bulging or fulness observable by the patient, as well as a sense of weight, in consequence of which he entered one of the Public Hospitals. There he was cupped over the part where the pain was, and also bled in the arm at the same time. After remaining in the Hospital for three or four weeks, during which his cough considerably diminished, he was discharged. From this time, however, to the beginning of 1847, the cough became more constant and severe; but which, as on the former occasion, he neglected till towards the month of June; when he applied to several medical men, but with no permanent advantage. Soon after this he went to Gravesend, at a time and under circumstances by no means favourable to his state of health. Whilst at Gravesend he imprudently went into a warm bath, which had such an effect on him as to oblige him to keep his bed for three days. The day following he came to London, and on the way was so feeble that he fainted in the steam-boat. On his arrival in town, a medical man was called in, who pronounced his disease to be consumption;—debility and nightly perspirations supervened, and he also complained of shortness of breath. Continuing in this state for some days, the medical attendant declared his case to be hopeless. Whilst he was thus suffering, and his friends sitting around

his bed, he was seized with an unusual sensation; and appeared as if dying, his senses forsook him, his sight failed him, and every one present thought he was dying; he, however, gradually rallied from this state of syncope, and began to recover some strength. He now complained of a sense of weight in the left side towards evening, and became sensible of the existence of a fluid, or of matter, collecting in that part, and was soon able both to *hear* and *feel* it. The fluid rapidly and greatly increasing, additional medical aid was called in, but all hopes were given up of his recovery: his sufferings became indescribable, his nights sleepless, his dreams frightful, his language incoherent, his breath short, the cough more severe, and his condition very distressing.

About the beginning of December, 1847, he for the first time consulted me, and expressed himself as thoroughly convinced of his approaching dissolution. On examining the patient I found the left lung in a state of perfect inaction from the effects of fluid, and a distinct unctuous râle, whenever he coughed, in the summit of the right lung, arising from recent liquefaction: and he stated that by walking quickly across the room, a feeling of suffocation would thereby be produced. I then prescribed for him, and being satisfied of the existence of some liquid effusion in the left side, I proposed, at my third visit, the expediency of having the operation of *Paracentesis* performed, after having explained to him the nature and object of that operation. To this he expressed his perfect willingness. Previous, however, to performing the operation I made another examination, and among other signs which fully satisfied me of the existence of a fluid in the left side, I found that the heart was forced considerably towards the right side. The operation having been decided on, I was induced, from the nature of the case, to select as the place for the introduction of the trochar the space between the sixth and seventh ribs posteriorly. On the instrument being introduced, there followed a discharge of a greenish-yellow fluid, more dense than water, but which yielded no offensive smell. In the course of a few minutes nearly four pints were drawn off; after which the patient was bandaged, and on being dressed expressed himself as feeling much relieved from many of those distressing sensations which he had before experienced, and found himself able to walk about the room quickly without the least inconvenience. On the day subsequent to the operation he, without asking my opinion as to the propriety of doing so, went out and walked upwards of two miles about his ordinary business. He now stated that he began to feel an improvement in his general health, and particularly in his cough—was able to attend to his affairs, but, according to his own admission, unhappily over-exerted himself for a few weeks; after which the accumulation of

fluid again became manifest, and rendered it necessary to perform another operation, which was successfully done by Mr. Wakley, on the 26th of January. On this occasion four pints and a half of fluid were removed, and the patient again expressed himself much relieved; but such was his anxiety about business, that he went out for a considerable portion of each day, and attended to his usual occupation. Seven weeks after this it was found necessary to have recourse to a third operation, the patient complaining that he felt the fluid now becoming very heavy. On the 15th of March the operation was performed, when only one pint of fluid could be abstracted. After a lapse of two weeks the fluid again began to be troublesome, and according to his own account he felt sick and drowsy, more especially in the evening, and profuse perspirations ensued, attended with loss of appetite; but though evidently losing strength, still it was impossible to prevent him from going out and attending to his employment.

Towards the end of April the fluid had again accumulated, and on the 27th of that month another operation was had recourse to. On introducing the instrument there followed, with the aid of some effort on the part of the patient, suppurating his breath, a quantity of very thick matter to the amount of nearly two pints, the removal of which for a time afforded him considerable relief. A few days, however, after this, he again became sensible of the existence of more fluid in the chest, which, in a great measure, was owing to his not confining himself to the house, but going out during an unfavourable state of the weather. This imprudent conduct led to his death on the 7th of May.

The expectoration, however, continued to be very copious to the last, and of a frothy and more-purulent character; and for the last forty-eight hours preceding his death he evinced all the characteristic symptoms of that unfavourable affection so graphically designated by Laennec, "Pneumonia of the dying."

Inferences deducible from the preceding cases.—In these two cases of liquid effusion into the chest supervening on phthisical disease, two questions of considerable importance present themselves for consideration, namely—what were the pathological conditions either of the system generally, or of the lungs in particular, on which the striking difference in the results could be said to depend?

If we look minutely into the particular points of each case, we shall be at no loss to find a solution for the difficulties which, at first sight, apparently invest both cases, by the application of certain principles derived from considerable experience in Consumptive diseases.

Let it be observed that Mr. B—— had, in 1824, when a young man, a very troublesome cough, attended with sore throat and nightly perspira-

tions. Again, in 1837, he had an attack of influenza, which was succeeded by shortness of breath, which, though existing previously, did not become permanent till after that attack. Here in this case the morbid condition of the throat, which existed in the first instance, and which was still further aggravated by the supervention of the influenza, must have acted as a powerful antagonist, whereby the deposition of tuberculous matter was checked, and eventually arrested, before it had time to extend itself in any considerable degree.

Seven years afterwards he became sensible of a considerable decline in his health, which he attributed to close confinement; and in the commencement of 1845, that is, in the winter season, he complained of a very troublesome cough; but it was not till 1846 that the more decided symptoms of manifest phthisis developed themselves, as was evidenced by the perspirations, the quality of the expectoration, etc. It is further to be kept in view that the liquefaction, as indicated by the symptoms mentioned, obviously resulted from some tuberculous deposit of long standing that had ripened, and not from any recent tuberculous deposit, which was prevented by the antagonizing influences already stated. The shortness of breath occasioned by the affection of the throat approached to an asthmatic condition, which so exercised the pulmonary tissue as to render the lungs incapable of any further deposition of tuberculous matter, just as we know the muscles of voluntary motion to be but rarely the seat of tubercles. I deem it proper to state, for reasons that will presently appear, that the right lung was the one chiefly affected, and the right side that in which the liquid effusion took place.

Now in the other case, that of Mr. Cussens, we have seen from beginning to end the supervention of no antagonizing affection whatever: the disease, it is true, showed itself in the winter season, still no antagonism resulted from that circumstance—at least, no one sufficient to induce any other effect, except that of giving a certain amount of chronicity to the disease. Besides, in his lungs, it is undoubted that, from his close attendance on his wife, who died from phthisical disease, a large amount of tuberculous deposition existed, the affection having had its origin in contagion. Here, then, we have sufficient means of answering the questions proposed at the beginning of these remarks, namely, Why there were such manifest discrepancies in the two cases? Cussens had little or no antagonizing agency engendered in his system, from first to last. In his case we have seen that he laboured at one time under an acute pain of the right side, arising, there can be no doubt, from hepatic disease. Now, the total absence of antagonism, the greater extent of tubercular deposition, and the accessory hepatic affection, will, without looking farther

sufficiently account for the difference in the two cases. Added to this, Mr. P—— took every care of himself after the different operations; he never ventured out, nor did he attend to any business. Cousins, on the contrary, unluckily went out the day after the operation, and could not be prevented from giving the most assiduous attention to his ordinary avocations in very unfavourable states of the weather. In the two cases there was expansion of the lungs effected by mechanical agency; but in the case of Cousins, after the third operation, this expansion proved unavailing, by reason of the supervention of acute pleurisy, followed by perforation of the lung, which was mainly attributable to the reckless manner in which he exposed himself to cold after the several operations, when the utmost care and vigilance were necessary to guard against all contingencies. Besides, he was for some time agent to a distillery, where, probably, he indulged rather freely, which no doubt had an unfavourable influence on his recovery.

Case of Charles Ivory, aged 30, having been Bethlehem Hospital, not at present from a wounded, but now in the service of one of the Railway Companies.—When this person applied to me in 1848, he had all the usual symptoms and physical signs of Consumption, while the expectoration was not only purulent and extremely copious, but also exhaled a most offensive odour. He had previously been under the care of several medical men, and had, besides, attended one of the Brompton Hospitals; but no hopes of recovery were held out to him, his disease being pronounced to be Consumption.

When I first saw him, it was evident that he had for many months been the subject of Consumptive Disease, as, on examining the chest, I ascertained the existence of an extensive cavity in the left lung posteriorly, and which extended from the spine of the scapula to about an inch and a half below the inferior angle of that bone, the form of the cavity being somewhat like an inverted cone.

After removing the febrile condition of the patient, by the application of leeches and other means, I proposed an operation in order to free the cavity from its accumulated contents, to which he readily consented.

On introducing the trocar, however, no fluid followed, to the surprise of Mr. Wakley, and myself, and two other medical men, and a Mr. Baker, an old pupil of my own, who had before, on two occasions, under my directions, performed *paracentesis thoracis*, though an unctuous râle was clearly and distinctly heard just beneath the site selected for the operation. This unexpected circumstance led me to pass a probe through the canula, when I at once found that the lung had not been penetrated, but was detached from the inside of the ribs. Knowing the danger that would attend the use of a longer instrument, by allowing

the accumulated matter in the cavity of the lung to escape between the lung and the ribs, and thus produce inflammation, I decided to proceed no farther by an operation.

On examining the instrument, the operator found that one of the edges near the point was jagged; the point moreover was rather blunt; in consequence of which, instead of penetrating the lung, it pushed it backwards, at the same time tearing it away from its adhesion to the pleural membrane, which circumstance led to the conclusion that the part of the lung opposite the trochar had probably acquired a semi-cartilaginous hardness.

Not succeeding as I anticipated in the operation, I necessarily adopted other means, and by the assiduous employment of the Inhaling tube, succeeded, contrary to the opinion of the medical gentlemen who had seen the case, in effecting a cure of the patient, who is now in the enjoyment of perfect health. Within the last few days (July, 1861), the patient called upon me, when I examined his chest to ascertain its normal condition, and found it perfectly free from every trace of his former complaint; though his case to all appearance was one of the most unpromising that was ever submitted to me.

Exuperius V. Parker, aged 32, of the merchant service, but formerly a petty officer in the Royal Navy, was admitted into the Infirmary for Diseases of the Chest in November, 1831. He was at that time suffering under frequent and painful cough, attended with expectoration of opaque yellow sputa, singularly fœtid, and so abundant in its discharge as to amount in the course of the day to three quarts, which was occasionally tinged with blood. Along with violent pain in the inferior part of the left side, his respiration was performed with difficulty; his sleep was unrefreshing and broken by constant suffering; and he had accessions of high fever on the approach of night. He had likewise profuse perspirations, and became excessively emaciated, while his complexion assumed a sickly yellow hue. It appeared, on inquiring into the causes which had led to this state, that whilst on his passage, in 1829, from Kingston to Morant Bay, in Jamaica, he had been frequently drenched to the skin, and did not change his clothes, but thoughtlessly allowed them to dry on his person. In consequence of this, he was seized with the yellow fever, and on his return to Kingston, a relapse occurring, he was admitted into the hospital. The fever was so violent as to produce delirium, during which he repeatedly rose from bed with the intention of committing suicide, and being at the time under a course of mercury, he, in these paroxysms, caught cold; since, when convalescent, he experienced severe pains in the left breast, accompanied by violent cough. The latter continued unabated; and on his return to

England, after a violent misery, in which he experienced a sense of strangulation, followed by a copious discharge of matter, he took medical advice at Lincolnshire. Being pronounced, by the gentleman he consulted, in the last stage of consumption, he applied for admission into the Infirmary. Here he was so far restored to health, notwithstanding the existence of a large abscess, occupying the inferior lobe of the left lung, which I detected on the first examination of the chest, that I recommended him to go to sea again. I was induced to give this advice from having previously met with two or three similar cases, in which the abscess had remained stationary for some years. He again made a voyage to the West Indies; and on his return, presented himself to me, affected with the same formidable symptoms I have detailed at the commencement of the case.

Having satisfied myself by auscultation with the naked ear (which I invariably prefer to the stethoscope) of the extent of the disease, and after various topical applications, combined with constitutional treatment, had failed to relieve the intense pain in his side or to relieve the suffocating respiration, I determined to introduce a small trocar into an intercostal space, immediately over the seat of the abscess. I had resolved to perform this operation when called in to the patient, two years previous to the period of which I am now speaking, but no improvement taking place; but finding his health so wrecked on the very day I had fixed for the paracentesis thoracis as to preclude its necessity, I thought it better to trust to time and palliative treatment; and the result proved that I had not judged incorrectly. Having afterwards observed a slight fluctuation about two inches beneath the left nipple, I directed the surgeon at the Infirmary, in the presence of Mr. Hudson, navy surgeon, to open it, having first carefully ascertained that the position of the accumulated matter had occasioned a sensible inclination of the heart towards the right side. From the intensely acute pain felt in this place by the patient, for which the local abstraction of blood had effected no relief, it appeared to me that Nature was endeavouring to work a cure by gangrene of the pleura; and that by fixing on this spot for the operation, a ready escape would be given to the contents of the pulmonary abscess. After the division of the integuments by the lancet, the same instrument was used to open the intercostal space, and no sooner was this effected than a quantity of air, with a hissing noise, issued from the orifice, followed by a discharge of opaque yellow matter similar to his expectoration, with the exception of its containing particles of a friable substance. The opening thus made continued to discharge matter, mixed with air, for the space of ten days, with a great mitigation of the patient's previous suf-

ferings. But having imprudently, when thus favourably progressing, sat for a considerable time in an unaired apartment, he was seized with so violent an inflammation of the bowels as to demand vigorous and decided antiphlogistic treatment. This attack produced a sudden and entire suspension of the thoracic secretion; but on the abatement of the inflammatory symptoms, his convalescence was slowly, though permanently effected. It may not be out of place to mention, that on examining his chest, I ascertained that the portion of the lung which had previously been the seat of matter and air, and from which a clear, gurgling sound, as well as pectoriloquism, issued, began almost immediately after the operation to be occupied by dilated pulmonary tissue; a process indicated by respiratory murmur. Before the operation, and indeed for three years previously, the respiration of the whole of the right lung, and of the upper portion of the left, as far as a line drawn horizontally from the outside of the nipple of the left breast to the spine, had been distinct, and somewhat puerile. In the inferior part of the left side of the chest, pectoriloquism was very audible; and nearly the whole of the lower lobe of the left lung was, as far as I could judge, the seat of an immense abscess, from which he could discharge matter at will, even to the amount of a teacupful. At times, during the action of coughing, I could perceive the intercostal spaces over the vomica apparently distended. Mensuration of the chest gave no perceptible difference between the capacity of the two sides; but that enlargement of the ends of the fingers, especially of the thumbs, which I have more than once observed is indicative of the existence of large excavations, was in this case remarkable. On his recovery, this unnatural tumefaction entirely subsided. I have been thus minute in detailing this case, from its rarity and importance. It was, as has been seen, a case of pulmonary abscess (though regarded by medical men as indicating Consumption), which had existed for three years, and resulted from pneumonia, the effect of yellow fever and severe cold. During a considerable part of this time I was often consulted, and consequently felt a strong interest in its progress; and as I had early intimated to my pupils my judgment on the case, and was sanguine in my belief of the patient's recovery, I derived great satisfaction from having the precision of my diagnosis verified.

Case of Master G—— P——, aged 16, *a Rugby scholar.*—Summits of both lungs tuberculated, with a small cavity in the upper lobe of the right lung—expectoration of opaque yellow sputa—troublesome cough of long standing—night perspirations—hands and feet feverish, and chest deformed. Recovery, and afterwards undergoes the fatigues of the Crimean Campaign.

My dear Sir, *Taunton, 20th December*, 1852.

My son is, I am happy to say, decidedly improved in the development of his chest and of the flattening of his back, since you prescribed for him, and which I am satisfied is to be fairly attributed to the use of the Inhalation in connection with your other treatment. The shoulder-blades, which you will remember were rather prominent, have subsided to their natural state, and his chest is rounder and fuller.

Since he has come home for the holidays he has had more or less cold with some slight cough, and therefore I have not been able to judge satisfactorily as to the degree in which the chronic cough may or may not be diminished. He still coughs occasionally of a morning, but not much, and he continues the use of Inhalation.

Yours faithfully,

Dr. Ramadge. E. A. P.

Dear Sir, *Taunton, August 4th*, 1853.

I have the pleasure to inform you that my son has got wholly free of the chronic cough with which he has for some time been affected, and is now in general good health, and is no need any longer of using the Inhaling apparatus.

Yours very truly,

Dr. Ramadge. E. A. P.

Ealing, July 2nd, 1861.

Miss P. presents her compliments to Dr. Ramadge, and is happy to say that her nephew has had no return of consumptive symptoms since Dr. Ramadge last prescribed for him. He went through the hardships of the Crimean Campaign without sustaining any diminution of health.

Case of A—— L——, Esq., aged 32.—Hereditary Consumption—chronic tuberculous disease of the right lung, with recent softening of tubercle in the apex of the left—hectic fever—copious expectoration—emaciation, accompanied with prostration of strength—severe periodical cough, and shortness of breath. Benefit of Inhalation—all Consumptive symptoms removed—obliteration of cavity in the lung, and total removal of all asthmatic complications. Recovery.

Sir, *Exeter, 20th October*, 1832.

The death of three sisters, a brother, and my mother, by Consumption, naturally impresses me with the apprehension of a similar fate, especially as I have had for many years what are usually considered symptoms of that disease. I have, however, by care and temperance, hitherto escaped tolerably well; but, of late, I have felt a great diminution of power, bodily and mental, with an increased tendency to cough, and other threatening indications, which have induced me to read numerous Treatises on decline, with a view, if possible, of discovering some rational system of treatment calculated to prevent the disease from becoming incurably established. I was, however, disappointed until I was fortunate enough to hear of one of your Works, the perusal of which has inspired me with confidence and hope, principally in consequence of your views being wholly in accordance with my own observations and experience in reference to members of my own family and others; and I consider it but just to afford you whatever satisfaction may arise from knowing that your opinions are confirmed and appreciated by one who has a deep personal interest in the subject. I am unacquainted with Medical Science, but I presume that what you call a "permanent catarrh," I vulgarly designate a "constitutional cough." If so, a member of our family, who when young was regarded as indicating all the prominent symptoms of Consumption, affords a very striking illustration of the correctness and truth of your views. Nor did a residence for some time in one of the mild climates, supposed to be most favourable to persons in his condition, produce any alteration of his complaint, his cough continuing till the close of life, which was protracted beyond that generally allotted to man, which affords an additional evidence of the soundness of your principles.

My eldest sister has hitherto escaped becoming a victim to Consumption, in consequence of having some one or other of the antagonisms you mention in one of your Works; but has a cough similar to that above stated, which she has had for years; and although frequently attacked with cold and inflammation of the most serious kind, she has always speedily recovered. The other members of my family who have died of Consumption had no such constitutional cough. I will not trouble you with further details. My wish is to obtain the benefit of your advice, and to know whether you think I can, by a full statement of the particulars of my case, enable you to prescribe for me; but should you feel unwilling to advise without first seeing me, I must be content to use the best preventives until professional engagements permit me to visit London. My profession is one to which, in consequence of my consti-

tutional habit, I am very ill-adapted, having always a passion for active pursuits. I am well as long as I keep my mind at ease, and take active exercise; but of late I am become quick, weak, and nervous, and I experience a strange sensation of cold and numbness in my hands, and my feet feel exactly as if they were "asleep," when I get out of bed in the morning; but this goes off immediately as soon as I begin to walk. I also feel a want of stamina as if I were sinking into a decline. The medical gentleman who attends me says I should ride and walk three times a day, and live well, and that my symptoms indicate a tendency to congestion in the lungs and liver, which I must counteract by promoting the circulation, and bringing the blood to the surface. My friends are very apprehensive regarding me, as I look very ill, and am pale and thin. My bowels are quite regular, and I do not perspire at night; but besides the weakness and nervousness I always feel, I am apt occasionally to get frightful chest pain, which, added to the anxiety I naturally feel in such a fatal disorder, relieves me often very much. The hope inspired by your admirable Treatise (for which you are entitled to the deep gratitude of the country) must plead my excuse for thus troubling you, and I have the honour to subscribe myself

Sir, yours most respectfully,

A. L.

Dr. Ramsbotham.

My dear Sir, *Exeter*, 7th *June*, 1860.

I have frequently recommended my friends to send for you to Exeter professionally, as I should do on any urgent occasion for myself and family, but happily this has not been required. I enjoy a fair share of health, except as regards an overexcited brain and too much sitting; but the lungs you reported so wonderfully rate nearly thirty years ago have never troubled me once since, and now are as free from disease as when I was thirteen; indeed, my long-wholesome and entire exemption from every complaint in the chest, when so many of my family have died of decline, and those that remain are so weak, are very remarkable. But I have *always* acted on your advice; the exemptions being that I have not been confined to my bed by illness for a single day these thirty years. This is a great mercy, for which I cannot be sufficiently thankful. My friend, the Rev. D. R., often speaks of you with gratitude and regard, saying you performed wonders on him.

Yours very sincerely,

A. L.

Dr. Ramsbotham.

Case of Mrs. K——, aged 40.—Pulmonary Consumption—cavity in the left lung, and incipient disease in the right—copious expectoration—hectic fever—night perspirations—and wasting, with great debility. Marked benefit of Inhalation, with other remedial treatment. Entire recovery.

Victoria Terrace,

DEAR SIR, *Torquay, November 10th*, 1855.

I SHOULD be glad to know whether you think it useful or advisable that my wife should use your Inhaling Tube in her present state. She has been sent here by our family physician, who gives it as his opinion that she is suffering from Pulmonary Consumption; and his opinion is confirmed by that of Dr. P. M. Latham.

She has been troubled with a cough since this time last year, though only slightly till the beginning of September, when it greatly increased, and she began to waste and decline rapidly, and also to expectorate. Both these physicians agree that she has a cavity in the left lung; which view is corroborated by her own experience; for she feels much pain there, especially when lying on the left side. Her cough has not diminished since she came into Devonshire, three weeks since; and now she begins to feel pain in the right lung also, so that I fear the evil is spreading.

As she has not much strength to walk abroad, she is anxious to try what effects Inhalation may have in restoring her to health, having seen one of your books detailing cases of Consumption cured by the use of it. I may mention that she is forty years of age, and is now in a state of pregnancy for the first time. Sickness prevents her from taking cod-liver oil, and the morphine prescribed disagrees with her so much that she has been obliged to desist from taking it. An acid mixture helped to relieve her from the perspirations at night; she has not been much troubled with them of late, and sleeps better than when she took the morphine.

Yours faithfully,

Dr. Ramadge. (REV.) W. K.

From Mrs. K.

DEAR SIR, *Torquay, December 28th*, 1855.

I AM glad to say that my cough has been considerably relieved by the use of the Inhaling process, and that I am altogether much improved in health and strength. The symptoms respecting which you inquire, fever and perspirations, have very much decreased. Still, when the weather is mild, as now, I feel some heat in my feet in the

evening, and a degree of perspiration at night, though not over my whole body as before.

The pills you prescribed I take at night with benefit; but I could not continue the mixture, as it contained a sedative, which disagrees with my stomach, as all sedatives do. But I take the other medicine so highly recommended.

Truly yours,

Dr. Ramsay. F. G. K.

Alford, Lincolnshire,

DEAR SIR, *19th January*, 1859.

IN reply to your kind inquiries regarding Mrs. K., Mr. B.'s niece, I beg to say that she is wonderfully recovered. She vigorously and honestly tried the Inhalation and the other remedies you recommended, and is now reaping the advantages of having done so, by the enjoyment of uninterrupted and good health.

Yours respectfully,

To Dr. Ramsay. (REV.) WM. M.

Case of Mr. Thomas B——, aged 23.—Confirmed Consumption.—great hæmorrhage from the lungs—painful cough—hectic fever, and profuse perspiration—greenish-yellow expectoration, and rapid wasting, with debility. Inhalation—its effects upon the lungs—establishing a healthy relation between inspiration and expiration—competes successfully for the Foot-Race Champion's Belt.

Argyle Square, King's Cross,

DEAR SIR, *March 8th*, 1856.

I HAVE to apologise for not sooner answering your kind inquiries concerning the health of my brother. The reason of my negligence is, that I have removed from my former residence in the Caledonian Road, in consequence of which I did not receive your letter so early as I should have done.

I am happy to say that my brother is, I believe, restored to health, at least to all appearance; the blood-spitting has quite disappeared, and he seems quite strong once more.

He still continues the use of Inhalation occasionally: and, I believe, under Providence, to that he may attribute his recovery. Allow me to express the deep sense of your kindness and able advice entertained by our family towards you, as being the means of preserving to us a son

and a brother. He will take an early opportunity of paying you a visit, in order that your personal inspection may confirm our hopes, and which I trust will be altogether satisfactory.

Permit me to subscribe myself, my dear Sir,

Yours very faithfully.

Dr Ramadge. James G. B.

Castle Acres, Norfolk,
1st August, 1859.

Dear Sir,

In reply to your obliging note of the 30th ult., I beg to express my decided opinion, that to your able treatment, my second son, Thomas, is indebted for his restoration to health from a decided case of Consumption. He is still in the service of the Great Northern Railway Company, and enjoys generally robust health. As a proof of the soundness of his chest and pulmonary organs, I will merely state that for nearly two years he has held, and still holds, the Champion's Belt for running in the Foot-Race against all Competitors.

Shortly after consulting you, he obtained a sick leave of absence for three months, and returned home. Here he persevered with the Inhalation of cold water only—owing to an apprehension of a recurrence of the spitting of blood—and returned to his duties at the expiration of his furlough, perfectly restored to all appearance; nor do I believe that he has had a day's serious illness ever since.

I have forwarded your kind note to him, and I am quite sure that, if agreeable to you, he will have the greatest pleasure in waiting upon you to assure you of his well-being. We can never be sufficiently thankful for the cure in which you have been mainly instrumental, and shall ever retain a grateful sense of your skill and kindness.

I have the honour to remain,

Dear Sir,

Your obliged and faithful servant,

Dr. Ramadge. (Rev.) J. H. B.

Case of Mrs. F——, aged 38.—Long afflicted with Disease of the Chest—both lungs seriously affected, the left containing several small excavations discoverable as far as the fourth rib anteriorly—apex of the right lung tuberculated, and having a cavity—the left collar-bone remarkably prominent, beneath which there existed a considerable depression—great expectoration of viscous frothy sputa, sometimes of a greenish colour, at other times semi-opaque, and occasionally tinged with blood

—hectic fever, and excessive perspiration—exhaustion, with correspondent debility—encouraged to go abroad, but persuaded upon to remain in England. Recurse to Inhalation—its speedy and beneficial effects combined with other remedies. Gradual improvement, and final recovery.

Bold Street, Liverpool,
9th March, 1857.

My Dear Sir,

It is, I think, more than fifteen years since you attended my wife, after Sir J—— C—— had pronounced her incurable, and not likely to live through the winter of that year.

She has since had a child, now thirteen years old, and is in as good health as could be desired; spare in figure, but active, light-hearted, and altogether free from ailment. You have been very many times spoken of amongst ourselves and our friends, and be assured your services and kind attentions are well appreciated.

Very faithfully yours,

Dr. Ramadge. R. F.

P.S.—The enclosure produces your tale, as I cannot help adverting to the wonderful change it has effected in her.—Due to it and to your advice and prescriptions, which under the blessing of Providence have enabled her to pursue the duties and share in the enjoyments of a wife, mother, daughter, and friend, she decidedly ascribes her recovery from a dangerous and protracted illness.

Case of P—— D—— F——, Esq., aged 35.—Pulmonary Consumption, with all the usual symptoms—disease in both lungs—frequent hemorrhage, but in one common to an alarming extent, from the upper lobe of the left lung, in which an extensive hepatization of tubercle was going on—copious expectoration of deep-yellowish matter, attended with distressing cough—exhausting nocturnal perspirations—loss of body excessive—sleep restless and interrupted—case hopeless and despaired of. Subjected to my usual mode of treatment—occasional application of leeches over the seat of active disease—Inhalation and appropriate medicines. Recovery, and return to business.

South Eastern Railway,
Superintendent's Office, London Terminus,
31st January, 1859.

My dear Dr. Ramadge,

Knowing as I do the interest you feel in a living proof of "Consumption Curable," you will, I have no doubt, be glad to hear that I

was never in the enjoyment of a better state of health than I am at present—strong and active, weighing nearly twelve stones, and presenting an extraordinary contrast with the poor "nine and a half stones" skeleton you first saw some ten years ago.

Ever mindful of your kindness, believe me,

My dear Dr. Ramadge,

Yours very sincerely,

P. D. F.,

Superintendent.

Case of J—— K——, aged 39.—Consumption in its worst form and advanced stage—complicated with acute bronchitis, extreme difficulty of breathing, and distressing cough—both lungs tuberculated, and secreting profusely frothy muco-purulent matter, partly from the excavations, and partly from the bronchial mucous surface—great emaciation, with considerable feebleness. Various modes of treatment had recourse to with no beneficial result. Case becomes hopeless and despaired of—accidentally hears of the treatment adopted by me—has recourse to the Inhaling process, with the other usual remedies—after the lapse of some weeks, a marked change becomes visible—expectoration diminishes—the breathing improves—cough ceases—gains rapidly in weight and strength—and in the course of a few months resumes his ordinary occupation.

Jerard Street, Derby,

SIR, *21st February*, 1857.

I WAS taken ill in 1852; soon after I began to cough, and expectorated about three pints a day. In January, 1856, I met with one of your Works on Consumption; but as I could not afford to purchase the Inhaling apparatus, I adopted instead of it the best substitute I could, with the other remedies recommended by you. My breathing soon began to be better, but my cough continued troublesome for some months, but that gradually ceased. In February, 1853, I weighed eight stones ten pounds—in February, 1857, I am thirteen stones two pounds.

Your humble servant,

Dr. Ramadge. J. K.

M—— Office, Derby,

RESPECTED SIR, *April 2nd*, 1861.

IN answer to your kind letter of yesterday, I beg to state that the Mr. K. referred to is the same person I alluded to in a previous

letter to you.' I met him this morning, full of energy, and in the enjoyment of good health, a wonder to look at. For two years he walked the streets of Derby a perfect object, muffled up to the nose with a thick shawl, fearful of breathing the atmosphere; indeed he could scarcely make a walk of it. It was not by my direction that he resorted to your remedy for a cure. If you recollect, your Work was reviewed in our Paper; a short time after which I met him, and having expressed my surprise at the improvement in his appearance, I found out how it was brought about. He had read your Work, adopted your remedies, and gave up all other experiments hitherto recommended to him.

He had tried homœopathy, hydropathy, &c., but all to no purpose: these, however, he entered upon your mode of treatment, he has become robust in appearance, gained both in weight and strength, and is now able to attend to his ordinary business. He does not, I assure you, forget to make known that but for your remedies he must long ere now have died. He still daily devotes a portion of time to Inhalation, as he finds the greatest benefit in doing so.

My own health, considering the deplorable state in which you saw me some years ago, and the little hope that were entertained of my life in consequence of the state of my lungs, continues wonderful; more especially seeing the confinement I have to endure in a close atmosphere, two or three times a week, until late at night.

Ever grateful for your repeated kindness, with my best wishes,

I remain, Sir,

Yours respectfully,

Dr. Lavender. J. B.

Case of Miss B——, aged 26, daughter of a General Officer and an M.P. —Had all the symptoms of manifest Phthisis—both lungs affected, the left nearly throughout its entire extent—great expectoration of greenish-yellow sputa, proceeding chiefly from an extensive excavation in the upper lobe of the left lung, and attended with severe and incessant cough—hectic fever, with profuse perspirations—rapid emaciation and excessive debility. Consulted Sir J—— C——, and other medical men, who recommended a change of air, which, however, had not the desired effect. Comes to London, and consults me—commences the usual course prescribed—Inhalation—application of leeches with other remedies—the distressing symptoms gradually become less—and the in-

provement so marked that the patient presuming on her amendment, ceases to follow the advice given, and having gone from home, after a lapse of time succumbs.

DEAR SIR, *Blackheath, 27th October*, 1843.

OUR poor daughter, Mrs. B——, I understand, died yesterday morning in Devonshire. The disorder for six weeks past had taken the usual course of affecting the bowels. Her health had previously appeared improved.

I am glad in having an opportunity of saying that I firmly believe your practice was beneficial to her, *and might have been more so if it had been followed up with more energy on the part of the patient.* But she suffered from the languor consequent upon disease, and also from the circumstance of her having had persons about her who had influence over her, and who, whenever any improvement was apparent, took the course of declaring it was evident there never was pulmonary disease, and ridiculing perseverance and regularity in the remedial measures proposed.

I remain,
Dear Sir,
Yours very truly and sincerely,
P. P. T., (M.P.)

* *Dr. Ramadge.*

Case of Mr. John A——, aged 27.—Had all the usual symptoms of Pulmonary Consumption, with copious expectoration and hectic fever —excessive wasting, accompanied with entire prostration of strength— consulted several medical practitioners, who declared the case hopeless —is with difficulty conveyed to my house—evidently verging on the last stage of Consumption—prescribe restoratives—in a few days recommend the Inhaling process—the application of a leech occasionally to the chest, with the use of mild sedatives. To the surprise of his friends and all who knew him, a change, though slow, becomes visible—the severity of the cough, and the expectoration, with the other symptoms, disappear—health returns, and the patient is able in some months to pursue his usual occupation.

Walcot Place, Hackney,
September 22nd, 1856.

SIR,

I WAS very glad to find that my brother had acted on my suggestion in applying to you for advice,—and sincerely trust his complaint

may be as speedily removed as my own was, under your skilful treatment.

It is now about twenty years since I became your patient (my former having baffled four medical gentlemen), when the means you used were, with the blessing of God, successful in restoring me to health.

I am now a husband, and have been the father of nine children, and have never yet had a return of the malady, my general health being most excellent.

Yours faithfully,

Dr. Russell. JOHN A.

Case of Mr. William [F——, aged 25, and engaged in mercantile pursuits, a too close attention to which and late hours gradually undermined his health, and ultimately led to the development of Consumptive disease, which, assuming a serious aspect, notwithstanding the treatment pursued by the medical attendant of the family, and that of an Hospital Physician, compelled him to discontinue all attention to business. Receiving no alleviation, and his prospects of recovery being altogether hopeless, he was advised by one of the medical gentlemen who had attended my Lectures on the Principles and Practice of Physic, and the Inhalatory for Asthma, Consumption, and other Diseases of the Lungs, to consult me. On seeing the patient and examining the state of the chest, I discovered a cavity in the summit of the right lung containing liquefied tuberculous matter, and giving out a loud tympanitic gurgle when he coughed. The opposite lung was tuberculated, and from the clavicle to the fourth rib anteriorly yielded a dull sound on percussion; the respiration was imperfect throughout the same space. The cough was painful and incessant—the expectoration copious, yellow, thick, and purriform—the heat of the skin excessive—the perspirations towards morning very profuse. I ordered the occasional application of one or two leeches to the chest, with such other remedies, including lubefaction, as were necessary to counteract the progress of the disease. Having persevered in this treatment for some time, the patient was restored to health, and returned to business.

Dalston Terrace,

Sir, *16th August*, 1839.

Being now restored to a measure of health to which I have long been a stranger, I beg to thank you for the favourable, and, according

to the opinion of my friends, the unexpected change your skill has brought about in my state. Given up by the Surgeon whom my family had been in the habit of consulting, and who had attended me for several months, but without effecting any cure of, or change for the better in, my complaint, and being also told by the late Dr. Davies, that no medical treatment whatever could arrest the progress of that Consumption which was gradually undermining my constitution, it was indeed with very faint hopes of success that I put myself under your care.

The benefit, however, which I have received is such as no person can sufficiently estimate, who has not been in a state similar to that in which I was when you first saw me. I have, therefore, to attribute my restoration to health to your skilful and excellent mode of treating my complaint.

I owe much to the Inhaling process, which has been the means of imparting strength and energy to my whole system. In short, it is owing to your sound advice and practical knowledge of my ailment that I am now able to resume my usual occupation.

With grateful thanks for your care and attention,

I am, Sir,

Your obedient servant,

Dr. Ramadge. WILLIAM E.

Case of the Rev. R. A. V——, aged 30.—Tuberculous Pulmonary Phthisis, in its advanced stage, with the upper lobe of the right lung affected with several excavations—the lower part of the same lung being at the time tuberculated—expectoration copious, and containing small portions of friable tuberculous matter—the trachea much inflamed and irritated, causing a loud mucous râle in that part, distressing the patient, producing frequent fits of coughing, with difficulty of breathing—hectic fever—night perspirations—with all the other symptoms characterizing active tuberculous disease. To arrest urgent symptoms, I ordered leeches to be applied between the centre of the right collar-bone and the nipple of the breast, and at certain intervals two or three leeches on the trachea, until the tubercular liquefactions, as well as the tracheal affection, ceased. In the mean time I prescribed the Inhaling process, with such remedies as were adapted to the exigencies of the case—in about two months a change for the better began to appear, and the worst symptoms to improve—the tuberculous liquefaction apparently ceased, while the expectoration greatly diminished with all the constitu-

tional symptoms—the local disease in the course of a few months very much decreased—the nocturnus gurgle was no longer perceptible when coughing or breathing, and the patient favourably progressed for a period of two years. The death, however, of some near relatives in the late Indian mutiny, with a too close and assiduous attention to literary pursuits, and an injudicious neglect of my advice, occasioned a relapse that proved fatal.

Manchester,
18th September, 1855.

My dear Sir,

My son, the bearer of this note, is said to be affected with Pulmonary Consumption. I should be much obliged if you will make yourself fully acquainted with his case, and give your faithful opinion upon it, with your advice as to future treatment.

He is my only son, and accounted by all who know him a man of attainment, genius, and worth, such as rarely meet in the same person.

You will find no difficulty in obtaining from him all the information you need.

I am, my dear Sir,
Yours faithfully,

Dr. Burnsley. (Rev.) R. V.

Mossley, near Manchester,
17th April, 1856.

My dear Sir,

I cannot express how much I feel indebted to your eminent services to my dear son. The report of the physician at Bournemouth, in September last, left me scarcely any reason to expect that he could live, and his symptoms seemed to corroborate that opinion. The reports, however, I now have, from him and about him, are most encouraging, and seem to warrant the hope of his full recovery. For this, I feel confident, he is indebted, under God, to your special treatment.

I am, my dear Sir,
Yours very truly,

Dr. Ramadge. (Rev.) R. V.

Edgbaston, Birmingham,
28th July, 1856.

My dear Sir,

I followed the advice you gave me, and have found the cough and expectoration as much subdued by it as I could expect. I have varied a little one week with another, and at present I cough with expectoration on an average about once while dressing, and once or twice after breakfast. In the after-part of the day I rarely expectorate

more than once, unless I talk more than usual. The mucous rattle in the throat has almost wholly ceased. All that was favourable when I last wrote still continues so—if any change, it is rather for the better—appetite good, sleep and digestion never better, and a general feeling of strength, except when the weather is oppressively hot. I inhale for half an hour twice a day,—avoid night air, and every exertion that induces exhaustion; and now I have no hectic fever. My pulse, as far as I can judge, is full, not very regular, but not feverishly rapid. My voice sounds better, and my old friends are surprised at the unexpected healthiness of my appearance and complexion.

About a fortnight ago I saw my father at Clifton, who was highly gratified with the very marked improvement in my appearance.

With thanks for your kind interest, and an abiding sense of the benefit I have received at your hands,

I am, my dear Sir,
Very sincerely yours,
(Rev.) R. A. V.

Dr. Ramadge.

Case of Mr. Edward C——, aged 25.—Hereditary Pulmonary Phthisis, exhibiting all the well-marked symptoms of that disease—haemoptysis, attended with dry cough, succeeded by copious expectoration of yellow and puriform sputa—profuse night-sweats—emaciation, with loss of strength, and dyspnœa—both lungs diseased—the summit of the left lung excavated—in the right lung, the respiration, except in the apex, owing to tuberculous deposition, was distinctly audible, and attended by râle and slight wheezing—the right cavity of the chest, in consequence of recovery from previous phthisical disease, was larger than the left, the clavicle of which was very prominent, and beneath which active disease existed. To put a stop to the further progress of the disease, I ordered in the first place the application of leeches over the site of the active disease in the left lung, and the re-application of them at stated intervals; and to diminish the severity of the cough and difficulty of breathing, one or two leeches to be consecutively applied to the trachea—Inhalation, with such remedial agents as were calculated to restore the patient to health.

Dear Sir, *Peterborough, 11th February*, 1838.

Several weeks having now elapsed since I left London, and received your advice, I feel myself called upon to write to you, and say that it is with feelings of gratitude and pleasure I have to inform you that my recovery has progressed most satisfactorily, and indicates no tendency to a relapse, but rather a steady and gradual improvement.

The cough has nearly ceased, and the chilliness, fever, &c., with the

feelings connected therewith, have entirely left me. To the Inhaling I have regularly attended, and shall continue to do so for some months.

Your medicinal method of treatment, and more particularly the mechanical (if I may apply such a term to the Inhaling process), certainly appear most effectual in eradicating, or at all events alleviating, a disease which daily carries off so many of our fellow-creatures to untimely graves, and which, even by the most eminent members of the medical profession, has hitherto been deemed incurable. Such a discovery demands not only the grateful thanks of your patients, but those also of every family in our variable climate, and I may say of the nation at large.

That you may live many years of happiness to witness the blessing effects of your valuable discovery, is my most earnest wish, and with every sentiment of respect, I subscribe myself,

Dear Sir,

Yours most obliged and most respectfully,

Dr. Ramadge. EDWARD C.

MY DEAR SIR, *Thorpe Road, Peterborough, 24th February*, 1857.

OUR patient, Mr. C., I am truly happy to say, is improving very much indeed. He has persevered in the treatment pointed out by you, from which he has derived the greatest benefit. His cough has nearly ceased, the constitutional symptoms have also subsided, the circulation quiet—no perspiration—appetite good—and there is no want of strength. He has had leeches applied whenever I deemed that necessary, and always with decided benefit. He is about to leave Peterborough for a short time, but I shall insist upon his continuing the medicine, inhaling, etc., during his absence.

Believe me, dear Sir,

Most truly yours,

Dr. Ramadge. THOMAS S., M.R.C.S.

Thorpe Road, Peterborough,

MY DEAR SIR, *15th July*, 1857.

I AM sure it will afford you as much gratification to be told, as it must to me to relate, that I consider my daughter now convalescent. She commenced a course of Inhaling immediately on receiving your advice,—continued it for some months, and still perseveres in using it daily; but being almost entirely recovered, there is a difficulty in convincing her of the necessity of continuing it any longer, especially during this hot season. She has also, for several months, in every

state of the weather, taken a quick walk daily a certain distance, without feeling the slightest inconvenience. It was not long before she began to improve; and now her cough, shortness of breath, and general debility have disappeared, with the exception of a very slight cough occasionally in the morning. She takes a good deal of exercise, and is able to undergo more fatigue than we ever anticipated.

In my anxiety and distress on her account I was naturally very much alarmed, for I never expected to see my daughter in her present healthy and vigorous condition.

With kind regards and best thanks,

Believe me, my dear Sir,

Very sincerely yours,

Dr. Ramadge. THOMAS S., M.R.C.S.

Case of Mr. James B——, aged 36.—Pulmonary Phthisis co-existing with Hydatids or Acephalocysts, *cured.* The upper lobe of the right lung was tuberculated and excavated, whilst the other contained a very large cyst, extending nearly as far downwards as the nipple, and having a great number of Hydatids, which, when the patient coughed, produced a soft muffled sound on auscultation. Some of these bodies were the size of pigeons'-eggs, others much larger, and, after bursting, were brought up amidst fits of strangulating cough—occasionally they were accompanied with a clear, but at times with a turbid liquid, coloured with blood, in which they floated—the right lung, when undergoing a liquefaction of tubercles, produced a distinct unctuous gurgle, which was attended with the usual constitutional signs of Consumption. After being despaired of by his medical attendants, the patient, having undergone various fluctuations, had the disease in both lungs removed by Inhalation, with the other medical treatment necessary for the case:—was ultimately restored to health, and is now engaged in active pursuits.

SIR, *Brentwood, 13th September,* 1832.

IT is now upwards of two months since I waited upon you for advice regarding an affection of the lungs, and you will, I have no doubt, recollect the peculiarity of my case, when I remind you of my having left some Hydatids with you on that occasion. On my return home I commenced the use of the remedies you prescribed, and found myself daily improving by them, though for some time thereafter my complaint became what I may term stationary, neither advancing nor retrograding. I have got free of the cough, and expectorate only once a day in the morning, when I rise. The matter expectorated varies in colour—being white, sometimes yellow, and at other times tinged with blood. I occasionally feel a smarting pain in the lungs, extending

nearly under the arm-pits, also in the shoulders, and down my arms to the elbows.

Since I saw you I have caught a cold, and had two or three more of the Hydatids, but smaller than those you saw. I have no fever, nor do I perspire at night, and my appetite is good. My breath is free from anything fœtid or disagreeable. I rise at six o'clock every morning, and walk two or three miles before breakfast.

I am, Sir,

Yours respectfully,

Dr. Ramadge. JAMES B.

MY DEAR SIR, *Brentwood, 28th April*, 1836.

I SHOULD have answered your letter before now to thank you for your very kind inquiries about my son, but expected to be in town, when I hoped to have had the pleasure of doing so in person. I am, however, prevented from going to London at present, but happy to give you a more favourable account of him than I ever expected to be able to do. He has gone on improving satisfactorily from the time you saw him, and I feel myself much indebted to you for the hints you gave me.

I saw an old patient of yours, Mr. Barbrook, a few days ago; he has got over the winter very well, but of late has begun to expectorate Hydatids, and says he must see you shortly.

I remain,

My dear Sir,

Yours faithfully,

Dr. Ramadge. THOMAS RICHARDSON, M.D.

The following case on which I was consulted was at the outset a most unpromising one, and seen by me once only; and the issue was such as might naturally be expected in the last stage of confirmed Consumption.

MY DEAR SIR, 12, *Notting Hill, 18th June*, 1833.

THOUGH so long a time has elapsed since I had the pleasure of seeing you, still my recollection and knowledge of you, and the length of time, and the profound and deep research which you have bestowed on the subject on which I wish you to be consulted, lead me to recommend the dearest friends I have on earth to take your advice respecting their daughter. The case is Pulmonary Consumption. I am only sorry I am not in town to meet you, as I am obliged to leave for Scotland early to-morrow morning. She is a daughter of my oldest friend and Military Commander, therefore be candid with them after

you have explored her chest, as they are prepared for the worst. In the critical circumstances of her case, I am persuaded we have reason to confide in your skill and long experience, which notwithstanding our acquaintanceship are my special inducements to entrust my friend to your care and superior knowledge in the treatment of that destructive disease. She has been under the care of an eminent physician and myself till within the last three weeks, and has also been visited by Her Majesty's principal physician, but I regret to say without any amendment.

I am, my dear Sir,
Very faithfully yours,
J. Johnson,
Dr. Ramadge. (*Surgeon-Major, Grenadier Guards.*)

Dear Sir, *Barnes, 7th October*, 1840.

Should you not be much pressed for time, I should feel obliged could you visit a patient of mine with me, who is in the situation of lady's-maid? Several of my patients have recommended you as performing, to my mind, very extraordinary cures; and I am therefore anxious that the young woman should have the benefit of your opinion.

I am, dear Sir,
Faithfully yours,
John Scott, M.D.
(*Physician to the Secretary of State for India in Council.*)
Dr. Ramadge.

My dear Sir, *Barnes, 24th October*, 1840.

Mrs. Wardle has made excellent progress. My daughter uses the Inhaling Tube regularly, and I think the increased action of the respiratory muscles must tend greatly to enlarge the capacity of the chest. I am satisfied that in narrowed and contracted chests the mechanical treatment must be invaluable.

Yours very sincerely,
John Scott, M.D.
(*Physician to the Secretary of State for India in Council.*)
Dr. Ramadge.

In the case of Mrs. Wardle, whom I never visited a second time, and who had all the constitutional signs of Consumptive disease, the progress of recovery was, I understood, everything that could be desired.


a
b
c


a


3


b


c
c

EXPLANATION OF PLATE I.

Summits of lungs of persons who many years preceding death had been consumptive, but died long afterwards of diseases altogether different. The drawings have been made from specimens taken on post-mortem examinations of the bodies.

(Figs. 1, 2, and 3, represent the posterior parts of the summits.)

Fig. 1.

a. Several enlarged air-cells, globular, sentient, and crowded together.

b. An irregular depression, semi-cartilaginous, partly blackish, indicative of natural destruction.

c. Vascular engorgement.

Fig. 2.

a. The centre of a pervious aggregation, the rugæ of which are slightly cartilaginous.

b. Air-cells enlarged by the rupture of several minor ones.

c. Chronic pleuritis, with gelatinous deposit.

Fig. 3.

a. Air-cells permanently enlarged.

b. Fissure of the lung, caused by separating it from the wall of the thorax, and disclosing a blackened state of the lung, the consequence of previous tubercular deposition.

c. A semi-cartilaginous membrane, which is seen to surround longitudinally the fissure above mentioned.

(The three following figures exhibit views of the interior of the lungs, obtained by incision.)

Fig. 4.

a. Chronic pleuritis.

b. Semi-cartilaginous contents, the result of obliterated excavations.

c. Patty tubercle of many years' standing.

d. Pulmonary tissue, blackened, hardened, and sentient, above the natural surrounding tissue—the site and result of tubercular ulceration.

Figs. 5 and 6.

a. Chronic pleuritis.

b. A number of patty tubercles, surrounded by black secretion.

c. Cartilaginous condition.

In Fig. 5, between a and c, there is a cavity concealed beneath the pleura, which presented a polished serous-like surface, the closing of which was prevented by the induration of the pulmonary tissue extending immediately below the site of the cavity.

DIRECTIONS

FOR THE USE OF THE

INHALING APPARATUS.

The patient should inhale and exhale through the tube, for at least eight or ten times in the minute, with the lips closely applied to the mouth-piece. Little effort is required beyond that of ordinary respiration. As an easy posture, and freedom from restraint of dress, &c., are desirable, an opportunity may now and then be taken of inhaling in bed.

On commencing a course of artificial respiration, it is recommended to the patient to use the Apparatus before each meal, for about five minutes, morning, noon, and night, and gradually to increase the time by a minute or two each day, until it reach half an hour. The process should then be reversed, and the progressive decrease of the respiratory exercise continued till it approximate to five minutes, the length of time with which it originally commenced.

The use of the Inhaler should be continued for a considerable time after the disappearance of the symptoms of the disease.

Should the patient experience any fatigue while inhaling, the Apparatus may be laid aside for a short interval, and then resumed.